UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Monday, February 2, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 minutes. All Regions

THE CHANGING MODELS OF BEEF ANIMALS

OPENING ANNOUNCEMENT: Every Monday Your Washington Farm Reporter brings you the results of a personal interview with some livestock specialist in the United States Bureau of Animal Industry. The subject for today is the CHANGING MODELS OF BEEF ANIMALS. All right, Mr. Reporter.

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Hello folks. In opening today's program I'm reminded of the poem which runs: ---

"Under the spreading chestnut tree the village smithy stands,
The smith, a mighty man is he, with large and sinewy hands."

And right here I want to pause long enough to ask you listeners what has become of the old-fashioned blacksmith shop that used to send its ringity-rankity, clinkity-clankity music up and down, across, and throughout thousands of prosperous farm valleys from one end of the country to the other.

The country blacksmith shop has gone along with the hoop skirt, hair pins, cotton stockings, and what have you. Times have changed and with changing times have come newer models, more products, and an education and training that has prepared us to judge, choose, and select the things we like best and are willing to pay for.

The blacksmith shop in many instances has been replaced by the garage, hair-pin manufacturers went out of business because women decided to cut their hari, and the hoop skirt, the tight skirt, and the long skirt have been replaced in a great measure by one that is short, snappy, and made for comfort and service.

Now, with these remarks about changing models and changing times, I'll jump right into the middle of today's subject--- which is----- THE CHANGING MODELS OF BEEF ANIMALS.

The information I'm going to pass on to you at this time came to me as the result of a personal interview with two livestock specialists in the United States Bureau of Animal Industry. One of these men, Mr. William H. Black is in charge of beef-cattle investigations, while the other man Mr. K.F. Warner is in charge of meat investigations. Putting it another way, Mr. Black knows how to produce an ideal beef animal and Mr. Warner knows how to handle the meat so it will please the most fastidious cook in the tiniest one-room apartment on famous, old Fifth Avenue in New York or historic St. Charles Street in New Orleans.

"Have beef models changed during the last 25 years?" That was my first question.

"Changed?" challenged Mr. Black in utter amazement, but before he could say more Mr. Warner drove in with the following questions, "Where's the foxcart, the buggy, the old-fashioned picture hat with eye-punching hat pins that used to enjoy front page headlines in this country?" And before I could answer he replied, "I'll tell you where they are---they are gone. We found and now use something we like better."

"Look here," said Mr. Black. "How long has it been since you saw a steer with a set of those long horns like you still see pictured in some of your school books?" And before I could answer his question, he answered it for me by saying, "The animals that produced those long horns have been discarded long ago and in their places we have newer models."

Mr. Black says that many of our cattle used to go to market when they were around 5 or 6 years old. That was yesterday. Now an animal that is privileged to live 4 years before going to market is considered old, and the bulk of cattle today are marketed from 2 to 3 years of age and many are much younger than that.

Why the change? That's what I wanted to find out, and that's what I did find out. Here's the answer.

"To begin with," said Mr. Black, "back in the days of the longhorn an animal had to be several years old before it had enough meat on it to make it worth slaughtering. That was because cattle feed in those days consisted mostly of whatever the animal could find to graze on. Lot feeding was not practiced then nearly so much as it is now. As civilization advanced and expanded, a lot of the natural grazing territory was fenced for cultivated crops. That made it necessary for cattle raisers to reduce their herds or provide feed in addition to the natural grazing. When they began to breed better stock and feed them in a systematic way--- they found that it was not necessary to keep them until they were old enough to go to school before sending them to market. In other words, instead of marketing 6-year-old animals, improved breeding and feeding methods enabled the producers to put even a better animal on the market

two or three years earlier."

If I understood these men correctly, many other things have changed the model of our beef animals to quite a degree within, say, the last 15 years.

Whereas we used to market 5, or 6-year-old animals, we are today placing them on the market at a year and a half, two, and three years.

Aside from store-bought feed and range condition there is another big factor that has changed the beef models in this country. That factor is the consuming public.

A housewife used to go to the market and ask for a piece of cooking beef--bring it home and in many cases put it in an iron pot that swung over the fire on a strong and secure crane. Again let me impress upon you listeners that that was yesterday. Today many housekeepers are busy with other things and drop into the market a few minutes before meal time and ask for a small cut of beef that will broil into a nice, juicy steak and be ready to serve piping hot in a few minutes after it is placed in the oven.

Whereas the housewife in the olden days asked for just a large piece of beef, many housewives of today ask for a small specific cut. She is also specific as to its tenderness and wants assurance that there will not be too much waste. That encourages the fattening of young animals and the marketing of them while they are in the "baby beef" or 2-year old stage.

At this point Mr. Warner pointed out that a large cut of beef is sometimes cheaper than a small cut. The crowd today seems to demand the small cuts and passes over the heavier ones which are often more economical if selected wisely and used for several meals.

Mr. Black pointed out that in the production of beef on high-priced land or under expensive conditions that it is necessary to have a quick turnover. In other words, such a producer can't afford to hold animals until they are several years old. The calf, under such conditions, should be made to gain rapidly from the time it is born until it is paid for at the market.

All these things combined and even still other factors have aided in the changing of our beef models. However, my time is too short now for me to try to tell you more about the CHANGING MODELS OF BEEF ANIMALS. If you want some of the latest information on this subject and want to produce the latest-model animals with graceful lines, shiny headlights, and deep-cushioned bodies, write for copies of the following Department of Agriculture publications:

FEEDING CATTLE FOR BEEF ---------that's Farmers' Bulletin No. 1549-F
BEEF PRODUCTION ON THE FARM -----that's Farmers' Bulletin No. 1592-F, and
BEEF ON THE FARM, SLAUGHTERING, CUTTING, AND CURING --- that's Farmers' Bulletin No. 1415-F.

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CLOSING ANNOUNCEMENT: Ladies and gentlemen; you have been listening to Your Washington Farm Reporter discuss the CHANGING MODELS OF BEEF ANIMALS. He mentioned the following publications:

FEEDING CATTLE FOR BEEF --------that's Farmers' Bulletin No. 1549-F
BEEF PRODUCTION ON THE FARM ----that's Farmers' Bulletin No. 1592-F, and
BEEF ON THE FARM ----------that's Farmers' Bulletin No. 1415-F.

If you want copies of these publications write to this station, or to the United States Department of Agriculture in Washington, D. C.

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UNITED STATES DEPARTMENT OF AGRICULTURE
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YOUR FARM REPORTER AT WASHINGTON. RELEASE Tuesday, February 3, 1931.

NOT FOR PUBLICATION

SPEAKING TIME: 10 minutes.

Crops and Soils Interview No. 5: Uses of Wheat.

ANNOUNCEMENT: We use a lot of wheat in this country. What becomes of it? Your farm reporter at Washington brings us the answer today from specialists of the United States Department of Agriculture. --- Well, Mr. Reporter? ------

-oOo-

Control yourself, folks!

I am going to report to you about desserts and cakes, and pies and doughnuts, biscuits and crackers, and a number of other things, including that old staff of life itself, bread.

In other words, I am going to tell you about wheat and what becomes of it; as it has been figured out by Dr. J. A. Le Clerc. Dr. Le Clerc is engaged in cereal food research in the Bureau of Chemistry and Soils.

He was pointing out to me that the great bulk of our wheat is milled into flour. What we export and what we use for feed is a small amount compared to what is made into flour. Out of some 830 million bushels in all, over 565 million bushels goes into making our 123 million barrels of flour.

Well, we ship something over 13 million barrels out of the country; that is, on the average, we ship that amount. That leaves us about 110 million barrels of flour to use here at home.

Now let Dr. Le Clerc figure out for us just what becomes of all that flour. There are no exact figures, but Dr. Le Clerc has made estimates based on the best figures obtainable. He has estimated how much the bakers use, and how much the housewives of the country use, and how much the other big users including railroads, and steamers and prisons and charitable institutions use. Not only what they use, but what they use for the different uses of flour.

Of course, bread leads the list. And bakers are our chief bread makers. They use nearly 35 of our 110 million barrels for making bread. But the Missus and the other home cooks are not so far behind yet in this bread making business. Dr. Le Clerc says they use 26 million barrels a year, or about twice as much as all the railroads, steamers, and eleemosynary institutions.

But bread as such from all the bakings takes considerably less than three-fourths of our flour. Fact is, it takes just about 74 of our 110 million barrels of flour added to this, however, should be the 11,000,000 barrels of self rising and pancake flours. Thus for bread and hot biscuits and pancakes, some 85 million barrels are used out of the 110 million consumed. But neither the millers nor the rest of us live by bread alone.

Cake baking, Dr. Le Clerc estimates, takes 5½ million barrels of flour in this country every year. And the cakes like-mother-used-to-make are still being made by mothers, sisters, and sweethearts; or other queens of our home culinary departments. According to the Doctor's figures, our home cake makers use 3 million barrels of wheat flour in the angels food, pound, sponge and gold cakes of different kinds and sizes. The large-scale cake makers, including commercial bakers and organizations and institutions, account for the other 2½ million barrels of flour that go into cake.

Then there are the pies. Dr. Le Clerc says its quite a job estimating pies. There are little ones, and big ones. Some have a top crust, and others are the open-face kind. Those with a top and bottom crust, of course, take more flour. But considering all those things, this food chemist concludes that all the store-bought and home-made pies take 1½ million barrels of flour.

That's something less than half the number of barrels needed to make our doughnuts. They say some folks can't see anything but the hole in the doughnut. But it takes more than three million barrels of wheat flour to put the annual ring around our national dought-nut supply. About half of those are fried right in the old home kitchen.

But let's hurry on. The various desserts and other kitchen mysteries which Dr. Le Clerc classes under the head of sweet-goods take over 6 million barrels of flour. And there again, the generous hand of the housewife measures out the half of all that.

Macaroni, which takes over 3¼ million barrels of flour, biscuits and crackers, which account for 5 million more, and pretzels, which use a modest quarter of a million in their convolutions, are all manufactured products. If you had time to add all these amounts up, with the odd figures which I haven't quoted you, you'd find our 110 million barrels of flour "all present or accounted for."

But that's not the whole story, as Dr. Le Clerc gave it to me. That flour is not used by itself. Try cooking it up by itself, if you think it is.

No, sir, Dr. Le Clerc has figured out what else we must of necessity use when we use that much wheat in the form of flour. And you will notice that the other main items used with flour are also largely farm products. In cooking up our supply of 110 million barrels of flour worth on the average something like 603 million dollars, we use more than 1½ <u>billion</u> <u>dozen</u> eggs valued on the average

at more than 321 million dollars. Into those pies, and cakes, and sweet-goods, and the like, which we make in the main from flour, we put -- that is, the cooks do, considerably more than $2\frac{1}{4}$ billion pounds of sugar, worth 117 million dollars. But that comes mostly from farms outside our country.

Let's keep on cooking. In using our wheat for flour in this country, we also use about 1 billion pounds of shortening worth 141 million dollars. In keeping the home and bakery fires burning in the preparation of breads and cakes and pies and other things, the wheat farmer's product also helps keep the dairy farmer going. More than $1\frac{3}{4}$ billion pounds of whole milk must be used, and 197 million pounds of dry milk.

Of course, the farmers products are not the only ones used with that flour. Salt, and baking powder, and phosphates, and soda, and arkady, and yeast, and flavor are also used by the millions of pounds. For instance, phosphatic flours are made by millers, especially for sale to makers of hot biscuits in the South. Hot biscuits made with soda and sour milk and ordinary flour often come to the table brown and bitter because milk varies in sourness, and the cook may easily get in too much soda because there is no telling how acid the milk is. Phosphates are added to the flour to correct this uncertainty, and make the soda biscuits turn out right.

All in all, in consuming our flour supply, about 1 billion dollars worth of other foods are used.

The average person in this country, however, doesn't eat as much wheat flour as he once did. Our consumption of wheat has dropped in the past 20 years from something like 220 pounds per person to 177 pounds. This is equivalent to 1 bushel of wheat less per capita. If we consumed as much wheat per capita now as we did 20 years ago, the total consumption of wheat, in this country, would be 125 million bushels greater than it actually is.

That would seem to leave a vacancy for more wheat, but Dr. Le Clerc reminds me that we can eat just so much. We eat less wheat, but we eat more of other things; more sugar, more dairy products, and more fruits and vegetables. In other words, he accounts for the drop in our use of wheat by our diet being more varied now than formerly.

ANNOUNCEMENT: Your farm reporter at Washington has given you a report on the uses of wheat as outlined to him by Dr. J. A. Le Clerc, of the Bureau of Chemistry and Soils, of the United States Department of Agriculture. Station --------cooperates with the Department in presenting this report.

UNITED STATES DEPARTMENT OF AGRICULTURE
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YOUR FARM REPORTER AT WASHINGTON. Wednesday, February 4, 1931

NOT FOR PUBLICATION

Speaking Time: 10 Minutes. All Regions.

Controlling Poultry Diseases

OPENING ANNOUNCEMENT: Once more Station_____ presents Your Washington Farm Reporter in one of his regular poultry talks. The subject for to-day is CONTROLLING POULTRY DISEASES and the Reporter is now on the air.

---oOo---

Hello folks. Once more it becomes necessary for us to roll up our sleeves and wade right in to the middle of a poultry subject that is not quite as dainty as a fluffy little baby chick nor as lovely as the blossoms of a sweet-smelling flower. However, when we have a flat tire on a hot, summer day and on a dusty highway filled with heavy traffic, we can't sit in the car and wish for something good to happen. No siree. We have to roll out and put on the spare tire even if we do get dirty and even if it isn't just what we'd like to be doing. And generally such an incident causes us to give the tires the "once over" before we start on our next journey.

That's what I want to talk about to-day----giving our poultry flocks the "once over" before such diseases as coccidiosis and B.W.D. get a foothold.

B.W.D. is the common name for a disease caused by the germ Salmonella pullorum. Isn't that a jawbreaker? Sounds like the name of a Pullman car, but in everyday language pullorum disease means bacillary WHITE DIARRHEA of chickens, and it's one of the worst diseases poultrymen have to wrestle with.

Dr. Hubert Bunyea of the United States Department of Agriculture says that B.W.D. does not respond to just ordinary sanitary precautions, although these are recommended because they are no doubt of some value. Neither is there any known drug or combination of drugs that will prevent or cure B.W.D. in hens or chicks. The public is therefore cautioned against placing undue confidence in commercial poultry remedies claiming to be effective in the prevention or treatment of this disease.

Dr. Bunyea says that the wide distribution of commercially hatched chicks has no doubt been instrumental in increasing or scattering the disease. The problem of controlling B.W.D., according to Dr. Bunyea, is neither one of hatching, nor of brooding. The control lies in BREEDING

HYGIENE. Therefore, poultrymen should strive to prevent B.W.D. by controlling it in the hen that produces the egg that is to hatch the chick. Now, if hens affected with B.W.D. can be detected and eliminated from the breeding flock, that practically solves the problem.

But, the big question is---HOW ARE WE GOING TO RECOGNIZE AND DETECT these carrier hens?

I'll answer that question as well as I can by quoting Dr. Bunyea who says: "The United States Bureau of Animal Industry has never officially adopted any one method of testing fowls for B.W.D., but recognizes the merit in the various methods now in use."

Many State agricultural experiment stations use what is called the agglutination test which has been of great assistance in the control of the disease. If you are interested in this method of testing hens for B.W.D. get in touch with your own State agricultural college.

In talking about B.W.D. Dr. Bunyea impressed me with the fact that no test is worth very much unless the birds affected with the disease are promptly eliminated from the breeding flocks, and the strictest and most modern sanitary measures applied.

"We are coming to believe," said Dr. Bunyea, "that B.W.D. is transmitted through the ordinary association of male and female birds a great deal more than was formerly realized."

It is also possible for the germs of B.W.D. to remain alive on contaminated ground or in contaminated poultry houses over long periods of time. These facts stress the necessity of thorough disinfection of premises following the removal of affected birds from the flocks.

While I'm on the subject of poultry diseases I want to say a few words about coccidiosis. That's another trouble maker that causes poultrymen a lot of worry and often knocks profits into a cocked hat.

The coccidiosis information I'm about to pass on to you came to me from Dr. E. A. Allen of the United States Bureau of Animal Industry. I visited with Dr. Allen for a few minutes in one of the cleanest little laboratories I ever saw, and the doctor's first statement was this, "Since there is no known cure for coccidiosis we recommend control measures.

"Coccidiosis," said Dr. Allen, "is what we sometimes call a self-limiting disease. That is, chickens that are able to survive the most critical period will lose all of the coccidia or disease - spreading germs by the end of say a month or six weeks, if there is no chance for reinfection."

An eminent doctor in the Harvard Medical School says that coccidiosis of chickens may be produced by any of 5 different species of coccidia. However, the kind of coccidia that live in the blind pouches of the intestines cause the most severe type of coccidiosis. Poultrymen sometimes lose 50 per cent of their flock from this type of coccidiosis.

According to Dr. Allen coccidiosis losses are heavier during the spring and summer and among chicks from 2 weeks to 2 months of age. However, this severe form of coccidiosis that I'm talking about may appear in flocks three months old or even older. I mention this to drive home the fact that coccidiosis is not confined only to chicks a few weeks old as was commonly thought.

Sanitation is the pivot on which profitable poultry production revolves and for that reason poultrymen should be especially careful and do their best to keep such diseases as B.W.D. and coccidiosis out of the flocks.

In case coccidiosis gets a foothold in your flock, Dr. Allen suggests the following methods of handling the situation:

"All dead birds and manure from infected birds should be deeply buried at some remote place away from the chicken runs. Better still--- burn this material."

If coccidiosis is found in your flock---isolate the affected birds at the earliest possible chance. Clean the pens and houses occupied by sick birds every day. Boiling water and some kind of coal-tar disinfectant may be used for this purpose---after all droppings have been removed and the house otherwise cleaned.

A great many poultrymen find that a screen-wire floor, several inches above the regular floor, prevents the chickens from picking up droppings and thereby minimizes losses from coccidiosis in this way.

Dr. Allen says it is very important that the food and drinking vessels be so arranged that chickens can not contaminate them with their droppings.

Flies have also been known to spread coccidiosis. Therefore, it may be advisable to screen poultry houses where coccidiosis is prevalent, and where a special effort is being made to check its spread. Screening would, of course, be specially adapted to flocks which are confined to the brooder house.

By observing some of the more important sanitary measures that I have mentioned such as the use of wire-screen floors, careful cleaning of poultry houses, careful handling of food and water vessels, screening against flies, and other ordinary sanitary precautions, poultrymen in many instances can minimize losses from coccidiosis.

If the caretaker who tends to the sick birds will be careful and do everything possible to prevent the further spread of coccidiosis this will help a great deal in wiping out the disease. The organisms may be carried on shoes worn in infested yards, on cleaning equipment, hands, and clothing. Therefore, be especially careful not to spread the disease from sick to healthy birds through carelessness on the part of the caretaker.

In addition to good sanitation, baby chickens ought to be fed a well-balanced ration containing plenty of vitamins, and this will help the

little fellows to survive an attack of coccidiosis should one occur.

In a short time I hope to be able to announce a revised publication on the subjects I have discussed to-day.

Hatching time will soon be here and if you anticipate trouble from either of the two sources I have mentioned to-day, better get in immediate touch with your own State college of agriculture.

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CLOSING ANNOUNCEMENT: Ladies and gentlemen, you have been listening to Your Washington Farm Reporter broadcast one of the regular Reporter programs from Station_____ in cooperation with the Federal Department of Agriculture.

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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON. RELEASE Thursday, February 5, 1931.

Federal Farm Board Interview No. 6: Potatoes!

ANNOUNCEMENT: Today your farm reporter at Washington reports on potatoes and cooperation among potato growers. As usual, he got his information from specialists of the Federal Farm Board ------ Gentlemen, are you ready for the report? ----- The ayes seem to have it ------ The ayes have it ------ Well, Mr. Reporter? -----

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Next to wheat, potatoes form the most important crop used for human food.

Potato production is carried on in every State from Main to Texas, and from Florida to Washington. In every section of this broad land of ours, there is some commercial potato industry.

Mr. Porter R. Taylor, of the vegetable section of the Federal Farm Board, called my attention to these facts; by way of telling me some of the problems to be met in getting closer cooperation among potato growers.

He pointed out that potato marketing is considerably different from the marketing of most other staple food products. Production is nation-wide, but marketing is regional. Potatoes move to market practically the year round, but they move from different sections at different times, and each section has its own peculiar problems. --- Now, hold in your mind, the map of these United States. And I will try to outline to you the background of our potato business, as Mr. Taylor sketched it for me.

Now across the top of our U. S. map, stretching from Maine to Washington State and north of the Mason and Dixon line, we have the bulk of our potato production.

That northern crop is grown in the summer months, and moved to market from September to May or June of the following year with the height of the harvest in October. The great surplus supply of our favorite tubers comes from Maine, and New York, and Michigan, and Wisconsin, and North Dakota, and Idaho, and Colorado. Other northern States also produce substantial quantities, but need shipments from those surplus States to fully take care of their population.

September to June is quite a long marketing period. Because of that long period, storage on the farm and at the shipping point, has become a vital factor in handling our supply of late potatoes for the winter and spring market.

Now then, let's follow this Farm Board specialist below the Mason and Dixon line. During the last thirty or forty years, potato production for market during the spring and early summer months has grown fast. It is now a substantial part of our great potato industry.

The big problem with southern growers is not storage, but good distribution. Those southern potatoes are shipped as soon as they are mature. The crop is quite perishable, and there is no effort made to store.

Each southern potato area digs its crop during a very limited period of from two weeks to a month, after which the next producing district to the north, digs its crop.

From now on, beginning in Florida we have a succession of States shipping early crop potatoes to market. The potato plant, you understand, is a comparatively cool weather plant. In the South potatoes must be grown in the cool season, be dug in soon as the potatoes mature, and be rushed to market before the next potato district to the North begins to ship in quantity. As one district leaves off, the next comes on. These series of early crops from the South are distributed quite widely in northern markets.

On the other hand, the northern late crop potatoes are sold within rather restricted areas. Freight costs are heavy, and most of the northern crops are marketed within comparatively short distances from where they are grown.

Taking the country over, about one-tenth of the total potato crop is needed for seed. Beside the growers of the main crop of late potatoes in the North, which are fed out from storage and marketed over a long period from September to June, and the groups of southern growers who market early crops over short periods in quick succession, there is another group of potato growers mostly along our northern border.

That group specializes in the production of certified seed, grown under some form of State supervision. Much of this seed potato crop is sold in the Southern States for production of the early crop, because climatic conditions in much of the Southern area are not favorable to seed production.

Then, of course, there are the growers within truck haul of market, who are not generally considered commercial growers. But their production at times has considerable effect on commercial distribution. So it is well to keep them in mind.

That's the general picture; three main commercial groups of widely scattered potato regions; the seed potato growers along the border, the main or late crop growers of the North, and the early crop growers of the South.

Naturally, as Mr. Taylor points out, each group has its distinct problems and cooperation among growers in these different regions has developed differently.

In the Southern States there have been a number of active and successful farmers potato organizations. Their problem has been primarily that of the distribution of a perishable crop into as many markets as practical to reach economically.

The Hastings area of Florida, the Meggetts area of South Carolina, the Norfolk district, and the Eastern Shore district of Virginia and Maryland all have co-ops. The organizations in the last two have been in existence for over thirty years.

In Colorado and Michigan and other sections of the late crop belt, organizations have operated for about ten years. A few years back associations were hastily formed in Maine, and Minnesota, and Idaho, but were not successful for several different reasons. One of the chief difficulties came as a result of acquiring more storage facilities than they could handle economically.

At the present time, a potato growers committee in Maine is working on plans for a new organization in that territory, Mr. Taylor tells me. And during the past year, we have had new potato cooperatives formed in the Kaw Valley district of Kansas and in Wisconsin.

Mr. Taylor says that better control of distribution of potatoes, both as to the rate they are moved to market and the markets to which they are moved, is highly important. So, too, is the question of acreage.

A relatively small increase in acreage or yield will result in a decided increase in total production. And any appreciable increase in total supplies of potatoes over normal is reflected in the prices growers get.

Mr. Taylor points out that during the past two seasons production has been below average due to the drought in some of our big potato producing areas. If we get an average or above average yield this year without any increase in acreage, we will have a supply in excess of consumption.

That's a tip to growers. Unless they reduce their potato acreage substantially below last year's acreage, production in 1931 can be expected to be bigger than needed and prices can be expected to be relatively low.

But to get back to cooperation, the present plan is to encourage growers in all important potato districts to organize. When there has been enough development, it is expected that organizations in the different regions can become affiliated in a way to solve their common problems. Chief among those problems, as Mr. Taylor sees it, are standardization, better merchandizing, and this control of acreage and distribution to market so as to prevent price-cutting gluts on the market.

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ANNOUNCEMENT: Your farm reporter at Washington has just outlined to you a little of our potato situation as sketched for him by Mr. Porter R. Taylor, of the cooperative division of the Federal Farm Board. Station ------ cooperates with the United States Department of Agriculture in presenting this report.

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UNITED STATES DEPARTMENT OF AGRICULTURE
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YOUR FARM REPORTER AT WASHINGTON Friday, February 6, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Dairy Interview: HOW MILK GETS TO TOWN: (No.1) PRODUCTION

ANNOUNCEMENT: Beginning today, at this time, Your Farm Reporter at Washington is going to bring you a series of three 10-minute discussions of "How Milk Gets to Town." Today he talks about the PRODUCTION of milk; that is, of high quality milk. Next Friday he will discuss modern methods of TRANSPORTATION; and two weeks from today, about PREPARATION and DISTRIBUTION. He brings you all of these discussions direct from specialists of the Bureau of Dairy Industry of the United States Department of Agriculture. Now, let's hear what Mr. Ernest Kelly, chief of Uncle Sam's market milk experts, has to say about production. All right, Mr. Reporter...

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The purpose of this series, is to tell the story of the experiences and travels of high-quality milk, from the moment it first sees the light of day until it is safely delivered to the consumer's door-step.

It is the story of HIGH-QUALITY milk, because Mr. Kelly believes that everyone who is really interested in the welfare of the dairy industry, IS concerned only with milk and cream of high quality.

And this is why he thinks so: First, he says, because low-quality products do not satisfy the consumer, and therefore, in the second place, they disrupt markets and, in addition, provide a cheap competition which conscientious, reputable dealers cannot be expected to meet.

Now, of course, we always have one advantage in the United States when we talk about high-quality milk. We can always begin with the comforting knowledge that this country probably has the finest and cleanest milk supply in the whole world.

However, while it is always perfectly proper to admit that you are good, if you really are good, it is usually stretching things a little too far to conclude that you are perfect.

Anyway, I guess everybody will agree that there is still plenty of room for improvement in our milk supply, taking the country as a whole.

There are, of course, differences in different localities. Large cities, for instance, have the advantages of a rigid inspection system and of regulations requiring that their general milk supplies be pasteurized. Consequently, there is not much question about the high quality of the milk supplied to most of our cities.

It is,, however, different in many rural communities and smaller towns, and of course, on the farm where milk is produced. Out here, everyone who drinks milk must depend entirely upon the carefulness of the dairymen who produce the milk for local consumption.

And, it is for this reason, as well as for economic reasons that production of clean, safe milk is primarily the responsibility of each individual dairyman---for his own family, remember, as well as for others.

Well, this responsibility isn't so burdensome as it would have been years ago, for the simple reason that we know a lot more about HOW to produce clean, safe milk.

And furthermore, it is now more profitable to do so---and most everyone is willing to accept responsibility if it means extra dollars in his pocket.

Mr. Kelly points out that the modern dairy farmer benefits in two ways by selling high-grade products. In the first place, prices depend to a great extent upon consumer's demands. It has been found, and proved, that good quality stimulates consumption; and, by the way, consumption of milk in the United States has increased from 43 gallons a year, per person, back in 1920, to around 56 gallons in 1929.

Thus, high quality products help raise the GENERAL price level.

And, in the second place, top-notch products bring higher prices than those of low quality, regardless of the general level.

Here's one statement of Mr. Kelly's that I remember particularly:

"With only a little more effort, and with only a little more outlay of money than are now spent by the dairy industry in production of milk and cream," he declared, "I'm convinced that the dairy farmers of this country could put on the market products of such quality that their income would be increased by many millions of dollars each year."

Well, as a result of the experiences of dairymen and the work of investigators, the actual business of producing high quality milk is now very simple. It takes very little more effort, as a matter of fact, than producing low-quality milk.

As Mr. Kelly put it, we hear a lot about the Seven Seas. But they are mainly for mariners and other nautically inclined folks. What dairymen are interested in are the TWO C'S; and they stand for CLEAN, and COLD.

"If milk is produced and handled under clean and sanitary conditions," and then is kept at a cold temperature, there will be little difficulty in meeting any reasonable market requirements.

Well, here's what the term clean sanitary conditions means to Mr. Kelly.

It includes, first of all, clean healthy cows.

Among other things, he emphasizes cleaning the cows thoroughly before they are milked.

"Curry or brush cows regularly," he recommends. "Also, if the hair on the udder, belly and flanks is closely clipped, it is much easier to keep the cows clean. Before milking, wipe these parts with a clean, damp cloth; or, if they are badly soiled, wash them with clean water, first, before wiping them."

Now, just as the cows should be clean and healthy, so must the milkers. Take no chances with sickness or disease, is Mr. Kelly's advice. And, by all means, he says, milk with clean, DRY hands--never with wet hands.

Well, my time is limited and so I can hit only the high spots in Mr. Kelly's outline of how high-quality milk is produced.

The next point he emphasized was the use of small-top milk pails, which keep a large part of the falling hair and dirt out of the milk.

Right after this, he urged special care of strainers, and special effort to see that they are clean at all times. The strainer may be the source of much contamination unless kept strictly sanitary; and remember, Mr. Kelly said, straining merely removes foreign objects such as dirt--- it does NOT remove bacteria.

A pure safe water supply is, of course, very important on a dairy farm. A separate dairy house or milk room for handling the milk is likewise necessary to strict sanitation. Cleaning and treating milk utensils to kill bacteria is, of course, VERY important; in fact very, very important.

Then, there is the fly nuisance to contend with; and there is the problem of preventing feed flavors in milk. And finally, of course, there is the very necessary step of cooling the milk and cream promptly after milking; and then, keeping it cold.

Now, these are the main things Mr. Kelly mentioned in discussing the production of high quality milk. For further information, and details, let me refer you to a group of Department of Agriculture bulletins which cover the whole subject very thoroughly.

First of all is Farmers' Bulletin No. 602, called "Production of Clean Milk." Then, there are the following publications along the same line: "Cooling Milk and Cream on the Farm," Farmers' Bulletin No. 976; "Washing and Sterilizing Milk Utensils,"Farmers' Bulletin No. 1473; and Improved Sanitation in Milk Production," Leaflet No. 3-L.

In addition, you might want Leaflet No. 25, called "Preventing Feed Flavors and Odors in Milk"; "Fly Traps and Their operation," Farmers' Bulletin No. 734; "The Stable Fly, How to Prevent Its Annoyance and Its Losses to Livestock;" Farmers' Bulletin No. 1097; and "Farm Dairy Houses," Farmers' Bulletin No. 1214.

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ANNOUNCEMENT: Your Farm Reporter at Washington has just brought you the first of a series of three talks on the subject, "How Milk Gets to Town." Remember that all of the publications Your Reporter mentioned are free of charge, as long as the supply lasts. Simply write either to Station _____ or direct to the U. S. Department of Agriculture in Washington, D. C. Let me repeat the titles and numbers of the bulletins once more. Here they are: "Production of Clean Milk" Farmers' Bulletin No. 602; "Cooling Milk and Cream on the Farm,". Farmers' Bulletin No. 976; "Washing and Sterilizing Milk Utensils," Farmers' Bulletin No. 1473; "Improved Sanitation in Milk Production," Leaflet No. 3-L; "Preventing Feed Flavors and Odors in Milk," Leaflet No. 25-L; "Farm Dairy Houses," Farmers' Bulletin No. 1214; "The Stable Fly," Farmers' Bulletin No. 1097; and "Fly Traps and Their Operations," Farmers' Bulletin No. 734.

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Washington, D. C.
February 7, 1931.

TO PROGRAM DIRECTORS:

Please correct copy of the radio release "Your Farm Reporter at Washington" for Thursday, February 12 as follows:

Page one paragraph 5 line 3 strike out "about 35 per cent" and substitute "a considerable part." The sentence should read: "And what's more, it has already sold a considerable part of its total volume, and the management anticipates no trouble in moving the balance at prices satisfactory to the growers before the new crop comes on next fall."

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Friday, February 6, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Dairy Interview: HOW MILK GETS TO TOWN: (No.1) PRODUCTION

ANNOUNCEMENT: Beginning today, at this time, Your Farm Reporter at Washington is going to bring you a series of three 10-minute discussions of "How Milk Gets to Town." Today he talks about the PRODUCTION of milk; that is, of high quality milk. Next Friday he will discuss modern methods of TRANSPORTATION; and two weeks from today, about PREPARATION and DISTRIBUTION. He brings you all of these discussions direct from specialists of the Bureau of Dairy Industry of the United States Department of Agriculture. Now, let's hear what Mr. Ernest Kelly, chief of Uncle Sam's market milk experts, has to say about production. All right, Mr. Reporter...

****

The purpose of this series, is to tell the story of the experiences and travels of high-quality milk, from the moment it first sees the light of day until it is safely delivered to the consumer's door-step.

It is the story of HIGH-QUALITY milk, because Mr. Kelly believes that everyone who is really interested in the welfare of the dairy industry, IS concerned only with milk and cream of high quality.

And this is why he thinks so: First, he says, because low-quality products do not satisfy the consumer, and therefore, in the second place, they disrupt markets and, in addition, provide a cheap competition which conscientious, reputable dealers cannot be expected to meet.

Now, of course, we always have one advantage in the United States when we talk about high-quality milk. We can always begin with the comforting knowledge that this country probably has the finest and cleanest milk supply in the whole world.

However, while it is always perfectly proper to admit that you are good, if you really are good, it is usually stretching things a little too far to conclude that you are perfect.

Anyway, I guess everybody will agree that there is still plenty of room for improvement in our milk supply, taking the country as a whole.

There are, of course, differences in different localities. Large cities, for instance, have the advantages of a rigid inspection system and of regulations requiring that their general milk supplies be pasteurized. Consequently, there is not much question about the high quality of the milk supplied to most of our cities.

It is,, however, different in many rural communities and smaller towns, and of course, on the farm where milk is produced. Out here, everyone who drinks milk must depend entirely upon the carefulness of the dairymen who produce the milk for local consumption.

And, it is for this reason, as well as for economic reasons that production of clean, safe milk is primarily the responsibility of each individual dairyman---for his own family, remember, as well as for others.

Well, this responsibility isn't so burdensome as it would have been years ago, for the simple reason that we know a lot more about HOW to produce clean, safe milk.

And furthermore, it is now more profitable to do so---and most everyone is willing to accept responsibility if it means extra dollars in his pocket.

Mr. Kelly points out that the modern dairy farmer benefits in two ways by selling high-grade products. In the first place, prices depend to a great extent upon consumer's demands. It has been found, and proved, that good quality stimulates consumption; and, by the way, consumption of milk in the United States has increased from 43 gallons a year, per person, back in 1920, to around 56 gallons in 1929.

Thus, high quality products help raise the GENERAL price level.

And, in the second place, top-notch products bring higher prices than those of low quality, regardless of the general level.

Here's one statement of Mr. Kelly's that I remember particularly:

"With only a little more effort, and with only a little more outlay of money than are now spent by the dairy industry in production of milk and cream," he declared, "I'm convinced that the dairy farmers of this country could put on the market products of such quality that their income would be increased by many millions of dollars each year."

Well, as a result of the experiences of dairymen and the work of investigators, the actual business of producing high quality milk is now very simple. It takes very little more effort, as a matter of fact, than producing low-quality milk.

As Mr. Kelly put it, we hear a lot about the Seven Seas. But they are mainly for mariners and other nautically inclined folks. What dairymen are interested in are the TWO C'S; and they stand for CLEAN, and COLD.

"If milk is produced and handled under clean and sanitary conditions," and then is kept at a cold temperature, there will be little difficulty in meeting any reasonable market requirements.

Well, here's what the term clean sanitary conditions means to Mr. Kelly.

It includes, first of all, clean healthy cows.

Among other things, he emphasizes cleaning the cows thoroughly before they are milked.

"Curry or brush cows regularly," he recommends. "Also, if the hair on the udder, belly and flanks is closely clipped, it is much easier to keep the cows clean. Before milking, wipe these parts with a clean, damp cloth; or, if they are badly soiled, wash them with clean water, first, before wiping them."

Now, just as the cows should be clean and healthy, so must the milkers. Take no chances with sickness or disease, is Mr. Kelly's advice. And, by all means, he says, milk with clean, DRY hands--never with wet hands.

Well, my time is limited and so I can hit only the high spots in Mr. Kelly's outline of how high-quality milk is produced.

The next point he emphasized was the use of small-top milk pails, which keep a large part of the falling hair and dirt out of the milk.

Right after this, he urged special care of strainers, and special effort to see that they are clean at all times. The strainer may be the source of much contamination unless kept strictly sanitary; and remember, Mr. Kelly said, straining merely removes foreign objects such as dirt--- it does NOT remove bacteria.

A pure safe water supply is, of course, very important on a dairy farm. A separate dairy house or milk room for handling the milk is likewise necessary to strict sanitation. Cleaning and treating milk utensils to kill bacteria is, of course, VERY important; in fact very, very important.

Then, there is the fly nuisance to contend with; and there is the problem of preventing feed flavors in milk. And finally, of course, there is the very necessary step of cooling the milk and cream promptly after milking; and then, keeping it cold.

Now, these are the main things Mr. Kelly mentioned in discussing the production of high quality milk. For further information, and details, let me refer you to a group of Department of Agriculture bulletins which cover the whole subject very thoroughly.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON. Monday, February 9, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes. All Regions.

WHICH PAY BEST ** SPRING PIGS OR FALL PIGS?

OPENING ANNOUNCEMENT: Once more Station _____ presents Your Washington Farm Reporter in one of his regular Livestock programs broadcast in cooperation with the United States Department of Agriculture. The subject for today is the question WHICH ARE MORE PROFITABLE --- SPRING PIGS OR FALL PIGS? ---- I wonder what your answer would be to that question. However, I won't embarrass you by asking you to answer----I'll just put Your Reporter on the air and let him explain.

--ooOoo--

Hello folks. I don't know that I can explain everything connected with that pig question in the ten minutes allotted to this program, but I'll work fast and do the best I can, and if I fail to reach the end I'll try to leave the subject in such a way that you can reach a definite conclusion.

To get this information which I'm about to pass on to you I visited with my friend Mr. E. Z. Russell in charge of the office of swine investigations of the United States Bureau of Animal Industry.

When a person has an opportunity to take two different routes both leading to the same place it is sometimes confusing to know just which one to take. That reminds me of an actual story of some tourists visiting the Shiloh Battlefield several years ago before highways were as inviting to motor travel as they are to-day. This particular tourist stopped at the forks of a country road and asked a nearby plowman whether he should go by Adamsville or Enville in order to reach the historic old battle field.

"Well," said the farmer, "If you go by Adamsville you'll wish you had gone by Enville, and if you go by Enville you'll wish to goodness you had gone by Adamsville. There are the two roads----take your choice, and you'll end up at the battlefield."

Now folks, that's the story Mr. Russell told me when I asked him which is more profitable, SPRING PIGS OR FALL PIGS.

"Both pigs are profitable, and both lead to the same place which is the pocketbook," said Mr. Russell," when they come from good breeding stock and when they are properly handled, managed, and fed."

A sow is a unit of production just like a cultivator, a wagon, or a tractor; and the more work you can get out of this unit, other things being equal, the more profitable it becomes.

Now, the business of a sow is to farrow pigs, and the more pigs she farrows--- that is with reasonable limitations --- and the oftener she farrows pigs---again with limitations---the more profitable she becomes to the owner.

"I believe," said Mr. Russell, "that the average sow ought to be bred so that she will farrow at about 12 months of age. Now, if this same sow farrows her first pigs in the spring and the owner desires to show her at a fair in the fall----he can skip a fall farrow that season if he prefers. But after that I believe it's more profitable to have the sow farrow a litter of pigs in the spring and another litter again in the fall------or certainly 3 litters of pigs in, say, 24 months rather than go along with one litter a year and producing that one litter either in the Fall or Spring."

Well, that's a definite answer all right, and if I should stop right here you listeners wouldn't have to draw on your imagination very much to finish the job, but I'm not through-----not yet.

According to Mr. Russell it costs almost as much to keep a sow for a year whether she farrows one or two litters of pigs. Now, if she farrows only one litter of pigs a year, and by way of comparison we'll say there are 8 pigs in that one litter, then the cost is based on the one litter or 8 pigs. If, on the other hand, she farrows 2 litters of pigs a year and each litter contains 6 pigs---then we figure the cost on 12 instead of 8 pigs. And that, as Mr. Russell pointed out, is just another way of keeping down the overhead expense.

He also pointed out that on account of weather conditions, housing arrangements, feed, and pasture, many hog raisers preferred either spring or fall farrows, but not both.

I thought maybe it got too cold in some of the Northern States to have fall pigs about the place and I asked him about that.

"That's a good point," he answered, "but it doesn't actually work out in real practice. For instance, the Havre Field Station, in northern Montana where it gets real cold, has been growing fall pigs successfully for 7 years in succession. The investigators have found that they can produce fall pigs and actually make money on them just as they do on spring pigs."

Now if you listeners will step in my rocket ship for just a second we'll drop from northern Montana up near the Canadian border down to Scotts Bluff County in Nebraska. That's quite a ways from the Canadian line, but I can assure you it gets cold----real cold even in Nebraska ---and some of the hog raisers there believe it's too cold to bother with fall pigs.

Now the truth of the matter is, according to Mr. Russell, the manager of the U. S. Experiment Substation at Mitchell, Nebr., in Scotts Bluff County swears by his fall-farrowed pigs and has wonderful success with them as well as with his spring-farrowed pigs.

"That," said Mr. Russell, "is just another way of saying what I said in the beginning, that raising pigs is not so much a matter of the time of farrowing,----although this does have a bearing in some sections and under some conditions----as a matter of good breeding stock which is properly fed and managed."

It's pretty well known that the United States Department of Agriculture recommends the use of self-feeders for sows and pigs during suckling. This arrangement permits the sows to stay in a thrifty condition because they can eat at will and this aids in the regularity of breeding. This in turn cuts the overhead cost of pig production which is an item not to be passed over lightly.

Mr. Russell told me of the time when he had 15 sows on a fall-millet patch in Nebraska. Each sow was given a clean place to farrow, a dry shed, and allowed the run of the millet field of about 20 acres. That fall farrow of the 15 sows was one of his most profitable pig crops because it reduced his yearly overhead to a minimum.

Of course there are a lot of feeding, housing, and breeding problems connected with spring and fall farrowing that each hog raiser will have to work out for himself. For instance, it's very important that all young pigs, especially fall and early spring pigs, be kept dry and in out of the cold drizzly rains that often fall in many sections at these seasons. It's also important that the house be so constructed and protected as to prevent drafts from blowing on the pigs.

I won't have time to give any more arguments in favor of either fall or spring farrowing, but I'll run over the high points in the talk thus far by repeating again that Mr. Russell says, "It's not the breed of hogs or the time the sows farrow so much as it is the individual animals and the way you feed and manage them." Spring and fall farrowed pigs can both be made profitable if you have the right kind of hogs and give them the right kind of feed and treatment. You can change the wording and say it the other way round so I won't do that, but if you want detailed information and some convincing facts on to-day's question, ask for the following publications:

SWINE PRODUCTION----------That's Farmers' Bulletin No. 1437-F
PRACTICAL HOG HOUSES----------That's Farmers' Bulletin No. 1487-F, and
SELF-FEEDING VERSUS HAND FEEDING OF SOWS AND LITTERS, and that's Farmers' Bulletin No. 1504-F. All are free for the asking as long as the supply lasts. Address your request to this station.

--ooOoo--

CLOSING ANNOUNCEMENT: And so Your Washington Farm Reporter closes another one of his regular livestock programs broadcast from Station_____ in cooperation with the Federal Department of Agriculture. Write either to this station or the United States Department of Agriculture in Washington, D.C., if you desire copies of the following publications mentioned in to-days program:
SWINE PRODUCTION----------that's Farmers' Bulletin No. 1437-F
PRACTICAL HOG HOUSES----------that's Farmers' Bulletin No. 1487-F, and
SELF*FEEDING VERSUS HAND FEEDING OF SOWS AND LITTER--- and that's Farmers' Bulletin No. 1504-F, and all publications are free as long as the supply lasts.

--ooOoo--

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Tuesday, February 10, 1931.

NOT FOR PUBLICATION.

Speaking Time: 10 Minutes.

Crops and Soils Interview No. 6: RUSSIA'S WHEAT LANDS AND OURS.

ANNOUNCEMENT: We have heard a lot about Russian wheat these past few months. But how does Russia really compare with this country in wheat lands? Your Farm Reporter at Washington has found out from the chief of the soil survey of the United States Department of Agriculture. Now here is his report ---

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Dr. Curtis F. Marbut has been showing me how Russia and this country compare in wheat soils.

Since that short-selling of Russian wheat on the Chicago market some time back, the wheat growing possibilities of Russia have been much talked about.

There have been a lot of statements about what Russia would and would not do in the world's wheat markets. One important feature of Russia's now famous "Five-year Plan" is to increase agricultural production. Since wheat is about the easiest thing Russian farmers can produce, naturally, wheat is an important feature of the 5-year plan.

Whether Russia will be able to put through that plan; or whether Russian wheat will play the part assigned to it, is something nobody can say for certain, Dr. Marbut points out. But getting down to the fundamental question of what Russia can produce, what actual soil resources she has, Dr. Marbut speaks with authority. He is not only the chief of our United States Soil Survey, but he is our leading expert on the soil geography of the world. Moreover, he recently returned from Russia and has just completed a comparative study of Russia's wheat lands and ours.

Now, remember, we have two main classes of wheats in this world; the soft wheats and the hard wheats. Most all the soft wheat is eaten near where it is grown. Very little of it goes into the world markets. The wheat grown in Germany and France and the eastern United States is soft wheat.

It is hard wheat that is world market wheat. And Dr. Marbut says that hard wheat is generally produced on comparatively dry fertile lands. This hard wheat grown on these dry, fertile lands is a rather recent development. Less

than a hundred years ago, these rich wheat lands were used for grazing, inhabited by nomad tribes. At that time, there was no world market for wheat. Then the rapid development of industry in western Europe and eastern North America, with standards of living rising, caused increased demand for bread and created a world market for hard wheat.

Roughly there is the setting: World market wheat is hard wheat and hard wheat is a fertile, dry, grass-land product. The capacity of a country to produce wheat for the world's market depends largely, Dr. Marbut says, on whether it has any considerable area of fertile dry land -- orginally grass lands.

Now where do you find those lands? Well, we have our great prairie lands. Canada has some. The Argentine some. Australia has some, and above all there is Russia!

Now let's compare our wheat lands with Russia -- or rather, let's let Dr. Marbut do it for us.

He says these fertile lands occur in Russia in a broad belt extending east and west. Don't forget that east and west, that's important -- those lands extend across European Russia into Asiatic Russia or Siberia to near Lake Baikal, with some small areas even east of that. The Belt is widest in European Russia, between the Volga and Dnieppen River, where it is about 500 miles wide. It is about half that wide in Siberia.

But just a moment! We have a broad belt of that sort of dry, fertile land, too. Ours extends north and south, from North Dakota to about the mouth of the Rio Grande River. The total area of our vast belt of fertile dry-land soils is large. But let's see how it compares with Russia -- and remember Russia's belt runs east and west, our runs north and south.

Dr. Marbut estimates that the total area of the better part of Russia's potential hard wheat land, including some rough land, is about 760,000 square miles, equivalent to about 490,000,000 acres. In addition, along the southern border of the belt there are 500,000 square miles or about 350,000,000 acres of secondary wheat lands. In all, there are over one million square miles or 800,000,000 acres of high quality wheat land in Russia. No one knows how much of this land is smooth enough to be worked with modern machinery, but Dr. Marbut says that it is certain that no large proportion of it is too rough, although the Russians have as yet made no accurate survey.

Those are impressive figures, but how do they compare with the figures on our great hard wheat belt. The total area of our belt is about 530,000 square miles, as against Russia's approximate million square miles. But our belt runs north and south, and south of high plains of northwest Texas it is not used for wheat, partly because the climate is too hot for a comparatively cool-climate plant such as wheat. So we really have only about 466,000 square miles or less than half the total area of the Russian wheat lands.

Dr. Marbut explained how Russia is planning to use that vast sweep of possible wheat lands. Considerable areas are virgin lands, never before used for wheat. One of the features of Russia's five year plan is to organize and develop large areas of that land in giant farms or grain factories to produce high-quality wheat to be shipped into the world's wheat markets.

The increasing needs for home consumption will be taken care of by better organization, better use of machinery, expert advice to farmers, and clean seed, and cleaner harvesting in the wheat sections, previously cultivated.

The plan is to have all the wheat produced on the great State farms available for export. According to the present scheme, by 1933 Russia plans to have 25,000,000 acres in wheat on lands which had never been cultivated before.

Dr. Marbut says he visited one farm of 300,000 acres -- you'll agree, that's quite a farm -- The yield on that farm was this year 14 bushels to the acre. If all the farms have even 10 bushels to the acre, it seems that they would have 250,000,000 bushels available for export. Russia has never been able to export more than 160 or 170 million bushels of wheat in any one year before the war when she was a great wheat exporting nation. In order to carry out her industrial plans, Dr. Marbut explains, Russia must buy machinery from foreign countries. She must export something to pay for it. The easiest thing for her to export is wheat, and the next easiest, timber.

Whether Russia will succeed in her plans may be questioned, Dr. Marbut says, but there is no question that she holds the clear advantage over this or any other country on the globe in hard-wheat land resources.

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CLOSING ANNOUNCEMENT: Dr. Marbut promises a little later this spring to tell our reporter about some of the other crop resources of this country and Russia, in which the United States makes a much better showing. These reports come to you from Station_____, in cooperation with the United States Department of Agriculture.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Wednesday, February 11, 1931

NOT FOR PUBLICATION

SPEAKING TIME: 10 Minutes

All Regions

POULTRY TONICS

OPENING ANNOUNCEMENT: And now, ladies and gentlemen, we present Your Washington Farm Reporter in one of his regular poultry talks broadcast every Wednesday from Station_____in cooperation with the United States Department of Agriculture. The subject for to-day is POULTRY TONICS. All right, Mr. Reporter, start pouring your tonic.

---oOo---

"My chickens are not laying very well and I'm wondering if a good poultry tonic would pep them up a bit and cause them to visit the laying boxes a little oftener this winter when eggs are worth more money than they usually are during the spring and summer."

That, folks, is an extract from a letter I saw over in the Department of Agriculture the other day. It came from a farmeress somewhere in the United States. She no doubt felt, as many people do, that chickens often need a little pushing during certain seasons and under certain conditions and wanted to know if a general poultry tonic would turn the trick and put the loafing hen back on the next with a song in her bill.

That letter gave me a thought and I started searching for the man in the Department of Agriculture who could tell me about the use, benefit, and advisability of using general poultry tonics without at least some definite idea of what these tonics are intended for.

Well, I found my man on the second floor of one of the little brick buildings occupied by the United States Food and Drug Administration. His name is Dr. H. E. Moskey and among other things he investigates various poultry remedies and tonics and tries to find out if they really do what is claimed for them.

When he heard my first question 'WHAT IS POULTRY TONIC?' he took a long easy pull from his pipe, eyed me like a Tennessee mountaineer, and then said, "If every poultryman who wants to use a poultry tonic would stop land ask that same question before spending money for the tonic in many cases he no doubt would be better off financially."

This encouraged me so I said, "Go on."

"Well," he said, "a tonic is a medicine that, when properly administered, tends to improve by slow and insensible degrees the organic action of the different systems of the body which react favorably to that particular tonic."

Putting it another way a tonic is a medicine that benefits the system without harming it. Right there is where the rub comes in administering what is sometimes called general tonics. It takes a veterinarian or some one who has made a study of medicine to know what drugs will actually benefit a chicken's system without harming it.

For example, Dr. Moskey said that strychnine was one of the medicines often used in treating animals. Where this drug is indicated for its stimulating effect, but on the other hand some animals couldn't stand strychnine and in such cases it would not be a good medicine to give but one that should not be given. An animal may be nervous, and unstrung as we sometimes say, as a result of being separated from its regular mates and its familiar surroundings. A hen may be upset and way down below her average egg production as the result of a sudden move, or unfamiliar surroundings. In such cases, Dr. Moskey would not recommend a tonic to quiet the hen down and put her back on the nest with her mind on her business, but prefers a return of natural conditions. Then she would automatically fall in line and once more start up that cheery cackle announcing a new egg.

That brings me to one of the big points I want to make in this program. Here it is about as Dr. Moskey gave it to me.

If your hens are down and out, have that run-down appearance, and egg production has slumped a little or a whole lot-----you know something is wrong. Now, the question, as Dr. Moskey points out, is not to jump at conclusions and imagine that your chickens need a general tonic. No, that's not the way to do it. He says the way to handle a situation like that is to get down to brass tacks and try to find out what the REAL trouble is and then TREAT THAT rather than an imaginative ill which may not even exist at all.

For instance, just suppose your laying house is heavily infested with mites. During the daytime your hens look tired and all worn out----just like they had been hard at work all night, and they don't produce the number of eggs they ought to or that they formerly produced.

Of course, in a case like that you might jump at the conclusion that since your hens had fallen off in egg production they needed a good general poultry tonic.

You could buy the tonic, the best in the country, and then feed it to the hens, but Dr. Moskey says they would likely continue their low egg production and still manifest that run-down appearance until you get into the house and clean up those mites.

The same thing may be said about lice. When the laying flock suddenly or even slowly drops off in egg production and there is no visible evidence, don't jump at conclusions but make a careful study of the whole matter. Examine chickens for lice, examine the house for mites, look into the feed and water situation, and try to locate the real trouble and then treat that rather than try a general remedy.

Poultry tonics are sometimes used during periods of recovery from certain diseases and troubles. For example, nicotine sulphate or tobacco dust is sometimes used in the treatment of poultry for large, intestinal roundworms. In such cases birds are often thrown off feed and appear to lose their appetites. In a case like this the use of a poultry tonic that acts as an appetizer is useful ONLY until the birds are back to normal conditions. The tonic will not stimulate the appetite beyond normal conditions, and should be discontinued as soon as this is reached.

Let me repeat again that chickens infested with either internal or external parasites require special treatments to get rid of each trouble and the best tonic in the world will not solve such a problem.

I have seen poultry tonics advertised that claimed to increase egg production. According to Dr. Moskey this is beyond the power of any tonic preparation. Maximum egg production depends on the breed of chickens, feed, management, sanitation, and other general conditions.

I don't want you poultry people to feel that there is no place for poultry tonics. There is. They have their place, and are all right when used accordingly, but they can't take the place of feed, care, management, and sanitation. That's the poultryman's job.

There are perhaps some misbranded poultry tonics on the market but they are getting scarce, thanks to the good work the United States Food and Drug Administration is doing. In fairness to the manufacturers of these various tonics it ought to be plainly stated that the majority of them are honest and are striving to turn out a good product. These people are to be commended for the good work they have done in their field, and if poultrymen will make a careful study of poultry diseases and troubles and apply the remedy for the specific trouble----and use tonics whenever and wherever they are of service----then the whole industry will be better off.

Dr. Moskey closed the interview by saying "In general poultry tonics are not effective in the <u>prevention nor the treatment</u> of poultry diseases."

And now folks, I see my time is almost gone so I'll have to close.

There is a new publication called "Poultry Diseases and Parasites," Farmers' Bulletin No. 1652. It contains some new information on poultry troubles and I'll be telling you more about it in one of these regular poultry talks.

In the meantime, if you want to find out something about misbranded poultry remedies, ask for copies of PRESS NOTICES on this subject.

---oOo---

CLOSING ANNOUNCEMENT: And so we close another one of the Farm Reporter programs broadcast from Station_____in cooperation with the Federal Department of Agriculture. Drop us a line if you want the publications mentioned in today's program.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON

Release Thursday, Feb. 12,1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Federal Farm Board Interview No. 7: PROGRESS IN PECANS.

ANNOUNCEMENT: And now let's hear what the farmers' co-ops are doing. Your Farm Reporter at Washington has again been to the specialists of the Federal Farm Board for facts about our great farmers' marketing movement. Today we have another report from him about what our pecan growers are doing. --

*****

The National Pecan Marketing Association has certainly made considerable progress since I last reported to you about it.

You remember, it was just organized last July. When I was talking to you early in November, I told you there were 19 locals in the Association. The growers in some sections, however, thought it advisable not to operate as independent units, but to join up with nearby locals; so there were only 15 locals which actually operated.

The National didn't get a sales manager until about a month before the season started. In spite of that, Mr. H. F. Buchanan, business analyst with the Federal Farm Board, tells me the National Pecan Marketing Association has made a really remarkable record.

The membership has more than doubled since the beginning of the pecan season last fall. There are now between two and three thousand members, with an active campaign now on foot to get more. And there are a number of requests for additional locals. Mr. Buchanan figures there will probably be four or five more local co-ops added to the National this year.

Even though the Association got away to a late start, it handled about 15 per cent of the improved varieties of pecans and about 5 per cent of the native varieties. And what's more, it has already sold about 35 per cent of its total volume, and the management anticipates no trouble in moving the balance at prices satisfactory to the growers before the new crop comes on next fall.

This last year the pecan crop was very short. That was the reason, growers in some regions didn't have as big a volume of pecans, as they had expected. In some sections they didn't have enough volume to keep the costs of operation down low enough to warrant running a local association.

On the other hand, in some few districts, the crop was unusually big. They got more nuts than they expected. The pecans came in so fast and furious that the local co-op's handling force had to work night and day. Growers brought in their nuts and signed up membership contracts at the warehouse door.

The National handled more pecans than any cooperative ever handled before. But the sections where the crop was big were few. Taken over the pecan States generally, the crop was short. Pecans, you know, are a very erratic crop. The production goes way up one year, and maybe way down the next.

For the past two seasons the crop has been rather short. For that reason, Mr. Buchanan says the present membership in the Association really represents a much larger volume than was actually handled this year.

Even so, the Association has taken more than 8 per cent of the pecan supply out of the hands of private agencies this year. In that way, it has reduced the volume which would have been sold on consignment to dealers, and so tended to prevent disordered markets.

That's just one of the accomplishments of the National, however. This association has actually adopted and put into effect the use of standard grades of pecans.

It has appointed brokers in nearly all the leading markets of the country to handle the product of its members.

It has gone even further. It has made experiments to determine the preferences of consumers as to size of pack, and grade of nuts, and for shelled or unshelled pecans.

Furthermore, the National Association has found that there are possibilities of extending the season for unshelled pecans throughout the year, instead of confining the marketing largely to the holiday season as heretofore. Pecans can be kept in storage for long periods without deterioration or shrinkage, so they lend themselves to handling as an all-year-around product.

In fact, it is already necessary to have a storage crop, Mr. Buchanan points out, even to supply part of the early holiday trade. There is considerable demand for pecans for Halloween. As harvest doesn't start until the middle or latter part of October, buyers prefer the well-seasoned storage nuts to those sometimes shipped green for this early fall trade.

However, extending the market for pecans is not the only phase of the National's work for its member associations and their grower owners. It is also trying to help locals cut costs.

During the past season, Mr. Buchanan said, the costs of the receiving and grading plants has varied from seven-tenths of one cent to two cents a pound. That is considered a very low operating cost, but the Association hopes to reduce that cost of operating locals to less than one cent a pound next year.

There are two ways they expect to do that. By studying the layouts of the various locals, especially those with the lowest cost, they may be able to standardize a more efficient layout to be used by all the member associations. In other words, they plan to learn from the experience of the locals this year.

Another means of reducing costs will be through bigger volume handled. There are not usually two crop failures in succession, so the pecan growers are looking for a somewhat bigger crop next year. On the basis of experience this year, where it is apparent that costs are likely to be high, locals in such regions may decide not to operate but to ship to another local so as to get enough volume for economical handling.

Mr. Buchanan says that members of the National Pecan Marketing Association seem much encouraged with the progress thus far. There has been a natural growth in confidence expressed by brokers and the pecan trade generally in the Association.

Growers have already received two advances on the first three pecan pools, covering all the pecans received up to the first of December. Through loans obtained, and with the help of the Federal Farm Board, the National has been able to make advances which have already amounted to more than the cash value offered by buyers in some sections.

Taken all in all, Mr. Buchanan says, remarkable progress has been made and the outlook for the National Pecan Marketing Association is very encouraging.

--ooOoo--

CLOSING ANNOUNCEMENT: Your Farm Reporter at Washington has just sketched for you recent progress of the National Pecan Marketing Association, a farmer-owned and farmer-controlled organization. These reports on cooperatives are made to you through Station_____ in cooperation with the Federal Farm Board and the United States Department of Agriculture.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Friday, February 13, 1931

NOT FOR PUBLICATION

SPEAKING TIME: 10 Minutes.

Dairy Interview: HOW MILK GETS TO TOWN: (No. 2) TRANSPORTATION

ANNOUNCEMENT: And now, here is Your Farm Reporter at Washington, with the second in his series of reports on "How Milk Gets to Town." Last week, you remember, he talked about Production. Today he discusses the next step, which is Transportation. He brings you today's discussion direct from Mr. R. P. Hotis, Market-milk specialist in the Bureau of Dairy Industry, of the U. S. Department of Agriculture. All right, Mr. Reporter...

---oOo---

Way back in the fall of the year 1842, an almost-forgotten gentleman by the name of Jacob Vail had an idea which started something.

You see the logical results of this idea in the huge modern tank cars of today, which may haul milk a thousand miles and more across country.

According to the old records, which Mr. Hotis has gathered together, it was Jacob Vail who first had the happy thought that if milk was first cooled it wouldn't sour.

At least he seems to be the first one to have done something about it. He coiled lead pipe around the inside of a hogs-head, packed the hogshead with ice, and then poured the milk through the lead pipe. This cooled the milk in somewhat the same manner as our present farm coolers.

This was not the most desirable method in the world, as the milk flowed inside the pipe making it hard for the housewife to keep the pipe clean, and somebody soon discovered that he could get the same results by cooling milk in springs. But, anyway, it was a start.

Up to this time---and quite a while afterward, for that matter---transportation of milk was largely the business of the individual farmer. The first shipment by railroad WAS made as early as 1838, over the old Boston and Worcester railroad; and the first shipment into New York City was made in the spring of 1842, over the Erie railroad. Folks knew very little about taking care of milk. At first they delivered only their evenings milk, using the morning batch for making butter. In the spring of 1843 it was delivered twice daily, except Sunday---and even then, quite a bit soured in warm weather.

I might add that the first train shipment of milk on Sunday, was made in August, 1843; and incidentally, the train never reached its destination. The

milk car went off the track and the milk was lost.

The transportation of milk to the city remained pretty largely an individual proposition for nearly half a century after the first railroad shipment.

Along about 1880, though, we find something significant happening. The milk train---that is, a solid train of several cars, all carrying milk---made its appearance. By this time the railroads were able to reach out and bring in milk from a distance of 100 miles.

They had been learning. They had learned, for instance, that in order to transport milk and have it reach the market in good condition they had to handle it just as carefully as they did the most perishable other products.

They had found that two things were absolutely necessary: first, refrigeration; and second, speed.

In fact, you might say that the history of transporting milk is pretty largely the history of learning how to use refrigeration.

Now, in the 20 years between 1880 and the end of the century, there were several changes. For one thing, the railroads and milk companies began to put up milk receiving stations along the way. So that, instead of each farmer shipping directly, he brought his milk to these stations, where it was cooled by setting in large vats of ice and water and all the milk from the community was shipped together.

A little later on, some of the large markets began getting milk in bottles. During the Gay Nineties, in fact, nearly one-fourth of the New York City supply was being shipped in bottles.

Through all of this time, the railroads were gradually reaching out to get larger supplies; and individual farm shipments were gradually disappearing from the picture.

Then, we jump up to the year 1910---for a <u>very</u> significant development. By this time refrigerator cars were more or less common; and the railroads were hauling milk for distances of 300 miles. And so, in 1910 one milk company in Boston introduced a tank mounted on an ordinary car.

Four years later, the first milk tank mounted on a motor truck was introduced, in California.

These were the forerunners of modern methods. However, it was not until after the war, in 1921, that the first commercial tank car---built especially to accomodate the milk tank---was put into operation.

Now, coming right down to the present moment, shipments from central stations by tank cars and tank trucks are, as you know, fast replacing the other forms of transportation.

Shipping in tanks has all of the advantages: ---sanitation, large volume, speed, and convenience.

Our modern tank cars are pretty well standardized. Most of them have two insulated tanks, each holding 3,000 gallons; although there are some tanks built with a capacity of 3,820 gallons each.

There is hardly any limit to the distance milk may be shipped across country in these big tanks---provided, of course, it is of good quality to begin with, and is handled under sanitary conditions.

One of the longest shipments ever made was from Wisconsin to Miami, Florida,---a distance of 1,800 miles. Of course, it usually isn't necessary to ship milk so far; but it CAN be done.

Now, tank motor trucks, on the other hand, vary widely in capacity--- from 900 to 2800 gallons. In some sections, also, they will pull at least 2 trailers, in addition, each with a capacity of from 1,000 to 1,250 gallons.

It is usually figured that the economical distance for hauling in tank trucks, is somewhere around 75 to 100 miles, although there are instances of longer hauls being profitable.

On the other hand, the covered motor truck, hauling milk in 10-gallon cans, is usually limited to about a 40-mile radius. Routes of 75 miles or slightly more, are to be found, but they are exceptional. Some cities still get most of their supply through these trucks.

Then, there is the old standby refrigerator car, which holds from 170 to 380 10-gallon cans in a single deck; and from 490 to 620 with a double-deck system.

Incidentally, the milk trade seems to be getting away from the old bunker system of icing cars. They now prefer the direct-contact method---that is, the ice is placed directly on top of the cans.

Another way of shipping is direct shipment, by express, in 10-gallon cans. If these hauls are very long, the cans have to be jacketed---that is, thoroughly insulated and the milk must be cold to start with. The reason, of course, is that this milk is exposed to either a heated car or summer temperature, is set off at station platforms and may sit there for some time before the dealer comes along to pick it up.

From refrigerator cars, the cans of milk are either loaded onto wagons and hauled to the retail plant; or onto covered platforms, and then reloaded

onto trucks.

Tank trucks, of course, go directly to the retail plant in the city; and tank cars are unloaded either at the retail plant or into tank trucks at a distant siding.

Now, the temperature of milk shipped in cans depends on the ice used.

But in tanks, the temperature is maintained because of thorough insulation, and also because of the bulk of the milk. Obviously, it is easier to keep a hundred gallons of milk cold, when it is placed in one container, than it is to keep one hundred gallons cold when placed in 100 one-gallon cans.

Well, all of this is a far cry from the days of old Jacob Vail. And yet, it hasn't been so very long ago, at that, that Jacob first got the idea that cooling milk would keep it from souring during transportation. There are people still alive who were living at that time.

The fact is, that transportation of milk is still a comparatively new development. Developments have come rapidly. We may look for still further developments.

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ANNOUNCEMENT: Ladies and Gentlemen, Your Farm Reporter has just presented the second in his series of three talks on the subject, "How Milk Gets to Town." Next Friday at this same hour he is going to report on the Preparation and Distribution of Milk. He asks me to remind you, by the way, of that bulletin called "Cooling Milk and Cream on the Farm," which is Farmers' Bulletin No. 976. Remember, you can get copies of this publication, free of charge as long as the supply lasts, by writing either to Station_____or to the U. S. Department of Agriculture in Washington, D. C

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON

Monday, February 16, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

FEEDING BEEF CALVES GRAIN BEFORE AND AFTER WEANING

OPENING ANNOUNCEMENT: Farmers with just a few beef calves are often puzzled as to the best method of feeding these calves for best results. Likewise, many big cattle raisers are troubled with the same problem. Your Washington Farm Reporter is going to discuss this very problem now in his regular program broadcast from Station ____ in cooperation with the United States Department of Agriculture. All right, Mr. Reporter:

--00--

Hello folks. There's a national project under way for the study of the different factors which influence the quality and palatability of the meats of farm animals. The United States Department of Agriculture is associated with a large number of State agricultural experiment stations in carrying on this project. Of course, I can't begin to tell you all the details connected with this work in a ten-minute radio talk, but I do want to tell you about one of the interesting experiments in connection with this work.

The particular experiment that I want to talk to you about took place at the University of Missouri and was carried on jointly by the Missouri Agricultural Experiment Station, the United States Department of Agriculture and the Sni-A-Bar Farms of the W. R. Nelson estate.

That experiment had to do with the feeding of beef calves both before and after weaning. The results of this experiment were conclusive enough to persuade Mr. W. H. Black of the United States Bureau of Animal Industry and Mr. E. A. Trowbridge of the University of Missouri jointly to write a bulletin on the subject. I received a copy of this bulletin the other day, and got so interested in it that I went in search of Mr. Black for additional information on the subject.

The American beef market is made up of people who buy beef, and those who eat it. What these people want, demand, and are willing to pay for determines, in a large measure, the market.

Now it seems that during the past 15 years there has grown up among our people a preference for lighter cuts of beef. Smaller families and perhaps changes in our living habits and conditions have been instrumental in bringing about this condition.

Cattle raisers and farmers, in an attempt to meet this changing demand and to offset greatly increased operating costs, have made an attempt to get their cattle fat enough for market and slaughter at an early age.

In rushing cattle along for an early market Mr. Black says that they have found out two rather important things about the fattening of cattle. First, that younger animals make a more economical use of their feed than older animals, but secondly, that the ability of older animals to make a more extensive use of roughage has offset, to some extent, the first advantage. However, where calves are raised instead of bought, the cow herd will consume the roughage that the young calves do not or can not eat. This makes for more economical use of feed.

According to Mr. Black, a few calves have been marketed for slaughter about weaning time for a good many years. Occasionally, such calves have been produced without grain feed, but in most cases grain feeding has been practiced, and many farmers have gotten good results by feeding grain to suckling calves that were to be marketed at weaning time.

And now folks, we are ready for the results of the experiment that I started to tell you about. The object of this three-year experiment was to find out which of four ways was best in handling calves from the time they were old enough to eat grain until they were marketed around the weaning age.

The calves were from medium to good cows,with a slight predominance of Shorthorn breeding, bought for this experiment at the Kansas City stock yards. In most instances the sires were purebred and in others they were grades.

The experiment included four ways of handling the calves.

One bunch of calves ran with their mothers on pasture, and received no other feed.

The second bunch of calves ran on pasture with their mothers, and in addition received a grain mixture in a creep, or small inclosure which permitted the calves to enter but excluded the cows.

The third bunch of calves ran on a separate pasture from their mothers, received grain in a creep, and nursed twice a day.

The fourth and last bunch of calves ran with their mothers on pasture, and received a daily grain mixture in a creep from 4 to 8 weeks before weaning time.

Now before that little clicking clock gets around to my stopping point let's run over some of the outstanding points in this experiment. They are applicable whether you have one calf or 50 calves to raise and market.

First, well-bred beef calves fed grain from the time they eat it until weaning time are usually fat enough, at that time, for slaughter, and weigh around 600 pounds per calf or approximately 100 pounds more than calves which have had NO grain.

Second, full feeding of grain in a creep is strongly recommended for calves to be sold for beef at or about weaning time.

Now let's take account of the calves fed in a creep from 4 to 8 weeks before weaning. According to the report these calves make very economical use of the feed given them, sell for more, shrink less, and can be put on full feed more quickly at weaning time than calves which have had no grain during the suckling period.

Whether you keep the calf in a separate pasture, and allow it to nurse two or three times a day in addition to a supplementary grain feed or whether you leave it with its mother on pasture, can best be determined by you yourself after considering the layout of your farm.

Many of the calves in this experiment were not sold at weaning time, but were retained for fattening. Without trying to go into the details of this part of the experiment, I'll just summarize it by saying that Mr. Black believes that as a general rule farmers will make more money out of their calves by rushing them along with their mothers on pasture, providing them with all the grain they will eat and then having them ready for the market at or soon after weaning time when they weigh around 600 pounds each.

In other words, Mr. Black believes that it's more profitable as a general rule to feed suckling calves grain and market them at or soon after weaning time rather than to provide them with no grain during the suckling period and carry them over for a long feeding period.

Mr. Black points out, however, that if you expect to run the calves on a full grain feed for 168 days or more after weaning -- that the feeding of grain to these calves while they are nursing is not recommended.

Doubtless many of you listeners will want more information on this subject which I have hardly touched. If so, ask for TECHNICAL BULLETIN No. 208-T, called BEEF FROM CALVES FED GRAIN BEFORE AND AFTER WEANING.

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CLOSING ANNOUNCEMENT: And so Your Washington Farm Reporter closes another one of his livestock programs broadcast from Station _____ in cooperation with the Federal Department of Agriculture. If you want a copy of TECHNICAL BULLETIN No. 208-T, called BEEF FROM CALVES FED GRAIN BEFORE AND AFTER WEANING, drop a letter or card to Station_____ or if you prefer you may write directly to the United States Department of Agriculture in Washington, D. C.

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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON.

RELEASE Tuesday, February 17,1931

Crops and Soils Interview No. 7:

Adjusting the Farm Business
To Its Physical Characteristics.

ANNOUNCEMENT: And now for a word from your farm reporter at Washington. Again he has visited with specialists of the United States Department of Agriculture. And again he brings us a report on one of the phases of this big question of adjusting our farm business to changed conditions-----Now, let's have the report---

--oOo--

There is no shot-gun prescription for adjusting all our farm problems.

That is the gist of what I gathered from talking to Dr. Walter J. Roth and Mr. E. B. Hurd, of the Farm Management Division of the United States Department of Agriculture.

Those gentlemen have been telling me about the types of farming studies the Department has been making in the last two or three years; in cooperation with experts of State agricultural colleges and experiment stations in various parts of the country.

It seems that these investigations are giving us a background which should make considerably clearer the possibilities and limitations of changes in the farming in different regions at any particular time. They are designed to find out what influence the different physical and economic conditions have on the farming of the country; and to point out under what conditions general recommendati for changes will or will not apply in a particular region.

Of course, every farmer knows that the answer to the question of what adjustment he can make to changed economic conditions lies at his feet. It is largely a question of what his farm can grow to advantage. And that is largely a question of climate, and the topography or lay of the land, and the character of the soil itself. Of course the man is important too but after all the man must work within the limits set by his environment.

As Dr. Roth points out, practical farmers nearly always have and probably always will take these things into consideration. But in the past, they have done it more or less instinctively, and unconsciously. And now that farmers in many sections of the country are finding an urge to change their farming to meet changing economic conditions, it is highly important that they know what changes they can make to advantage and what changes they can not make. They must have a sound basis for the faith that is in them.

The point, as Dr. Roth and Mr. Hurd agree, is that different sections of most any State have different physical conditions. The same might be said of many counties. And as many of you know, different parts of the same farm may be decidedly different in those physical characteristics which determine what the farm can best produce.

Strange as it seems, however, these physical differences have often been overlooked in the past, not only by new farmers and old farmers in new sections, but even by many of the agricultural advisors who bring to the farmers word of the latest findings of the Experiment Stations and recommend revised practices.

The trouble was the advisors couldn't be expected to know all the differences in their big territories, as a first-rate farmer does on his own place. The studies had not been made to give them that background.

Recommendations were often made on the one hand, on the basis of what applied in a general way in our so-called agricultural belts, such as the Corn Belt, the Corn and Wheat Belt, the Cotton Belt, and the like. Recommendations on that basis didn't take account of the regional differences within the particular belt. On the other hand, detailed studies of selected groups of individual farms in a local area have been made for a considerable time. But when the same management found on a successful farm was applied maybe to a neighboring farm with different physical characteristics it didn't work so well.

Finally, the farm economists realized that to bridge the gap between information as to our main agricultural belts and the information obtained from studies of individual farms, they needed much the same knowledge of the different regions within our agricultural belts as an experienced farm has of the land on his own place; only they needed to know this with even a greater degree of certainty. That is the main reason behind these types of farming investigations which the United States Department of Agriculture is conducting in cooperation with various State agricultural colleges and experiment stations.

And, by the way, this subject of types of farming in the United States is discussed in Farmers' Bulletin No. 1289.

But we have been talking about these different physical characteristics of land in different regions. Let me give you a few examples of how climate, and soils, and topography affect crop growing as Dr. Roth and Mr. Hurd gave them to me.

Of course, you know, our so-called farm belts as we now find them are largely a matter of climate; that is, they are determined in a general way by the rainfall, and the temperature, and the length of the growing season. Of course distance to market and transportation play a part too, but climate is probably a major factor. The character of the soil and the topography often differ widely within a given belt. In Iowa, for example, the proportion of pasture on farms when studied by townships, varies from ten per cent to eighty per cent, chiefly due to the amount of rough land in different parts of the state.

Then there is the simple question of sweet soil and sour soil. Alfalfa and sweet clover are sweet soil crops. You can't raise them on sour soil. On the other hand, soybeans, and cowpeas, and tomatoes grow well on sour soil.

And changing economic conditions affect agricultural regions differently. The low price of wheat in the eastern Corn Belt has brought about an increase in oats, and a decrease in wheat, while in the Red River Valley of the North barley has taken the place of wheat.

In western Kansas and Nebraska the introduction of machinery has made possible an expansion of wheat acreage not possible in other sections because of the greater competition of other crops, and because of rough land which does not permit the use of large-scale methods.

The flat land of our Grean Plains permits the use of machinery, while the dry climate keeps out other crops than wheat. Corn, on the other hand, will grow better compared to wheat in the humid areas of the country.

As Dr. Roth indicates, there are limitations to adjustments which can be made at any given time. You can't expect to get high yields of rich-land crops on poor land, or on rich land where the climate is not suited. However, there have been some very decided shifts in farming in recent years as the Bureau of Agricultural Economics' mimeographed publication, on "Shifts in Farming" will show you. Over a longer period of time, new forces do come into action.

Just what shifts are possible at a given time within any given region however, these Farm Management experts say, depends largely on the climate, and topography, and soil of the locality where the change is to be made. Those which are economically practical must be determined by studying carefully that which is possible in the physical situation under the existing economic conditions. Sixteen or seventeen States have already made these types of farming investigation and eventually it is hoped that we will get a similar background for more detailed work throughout the whole country. In the meantime, Dr. Roth urges that in making necessary adjustments, we take stock of these possibilities and limitations and adjust the farm business within the limits of its physical characteristics in the light of current economic conditions.

ANNOUNCEMENT: This time next week your farm reporter has been instructed to report to us on another phase of this big question of adjusting to changed conditions. He is going to tell us about the Soil Survey and our National Development. Now anybody who wants that bulletin on "Type of Farming" can get it by writing to this station or to the United States Department of Agriculture. Ask for Farmers' Bulletin No. 1289. "Shifts in Farming" is a mimeographed publication of the Department's Bureau of Agricultural Economics.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON. Wednesday, February 18, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes. All Regions.

DISEASES AND PARASITES OF POULTRY---FARMERS' BULLETIN 1652-F.

OPENING ANNOUNCEMENT: Ladies and gentlemen, Station_____ takes pleasure in presenting Your Washington Farm Reporter who is going to talk to us about a new Department of Agriculture publication called DISEASES AND PARASITES OF POULTRY. All right, Mr. Reporter, open up that new bulletin.

---OoO---

Folks, in opening up the discussion about this new publication by the U. S. Department of Agriculture on poultry diseases and parasites I'm reminded of the time when I was a little boy back on the Tennessee River near the foot of the famous Muscle Shoals. Our only connection with the outside world was by the palatial steamboats then plying the rivers.

The St. Louis steamer was especially fine, and we discussed her coming for hours before she actually arrived. First, we heard the big chime whistle long before she reached our landing. Next, we saw the dense black smoke from her funnels drifting lazily upward above the timber line, and then----she poked her nose around the bend about two miles away and shortly sounded the big whistle announcing her intention to stop at our landing. That was always a big moment in my life. We had heard the boat coming, she was in sight, and now she was actually slowing down and easing in to our own landing. What new things did she have aboard for us this time? Of course, there was the regular run of clothing, shoes, groceries and such things, and we noticed these staple products because we realized they had a place in our lives. However, occasionally when the boat pulled in she unloaded a new cultivator, a new type of cotton planter, or a new-model buggy, and these NEW things were real exciters of the imagination because we had never seen them before.

Now folks, I've been telling you about this new poultry bulletin for some time, and now it's here----tied up to the landing and ready to unload its pages and pages of information.

Some of this information is like the staple products the St. Louis boat unloaded, and some of it is brand new and given out by department specialists for the first time.

Mr. A. R. Lee, our poultry specialist in the Bureau of Animal Industry called my attention to this new bulletin and to a number of the new things in it. The authors are Drs. John S. Buckley and Hubert Bunyea of the

bureau's Pathological Division and Dr. Eloise B. Cram of the Zoological Division.

For example, the old publication on poultry diseases, which is now out of date, a back number, and no longer available, contains 41 pages of material. The new publication that I'm talking about contains 62 pages of illustrated material presented in a very practical manner.

According to this new bulletin certain poultry diseases respond favorably to treatment, but there are others that resist all efforts at treatment. Some of them cause very heavy losses. The bulletin points out the diseases and troubles that can be expected to respond favorably to treatment and mentions some of those for which no known cure has been found. Those two items alone ought to be worth a lot to poultrymen.

The bulletin says that chickens, turkeys, ducks, geese, and pigeons are all susceptible to many diseases, some of which are highly infectious, or as we sometimes say "catching." Diseases affecting all kinds of poultry are discussed in this bulletin.

Poultry flocks are often infested with numerous kinds of parasites, some of which live on the surface of the body, and others inside, especially in the crop, stomach, and intestines.

Now, the purpose of this bulletin I'm talking about is to inform the poultry owner as to the characteristics of the various diseases and infestations in order that he may intelligently use the most approved methods of combating them.

There isn't much profit in raising chickens which are diseased or infested with so many parasites that they steal the nourishment the bird ought to use in producing eggs or putting on flesh."

The second paragraph in this new bulletin tells how to PREVENT poultry diseases. In other words, the Department's poultry experts believe that a stitch in time saves nine----especially in the poultry business. They believe in locking the stable door before the horse is stolen, and that's just another way of saying that it pays to keep chickens clean, healthy, and under sanitary conditions to help offset and prevent as many poultry diseases from developing as possible.

Another question which gets attention is: HOW TO CONTROL diseases in poultry in case an outbreak actually occurs. That's certainly a good point. It's not only well to know how to prevent poultry troubles, but it's equally important to know what to do in case a specific trouble develops.

For instance, I heard someone asking Dr. Buckley once what is the best plan to follow if chicken pox, or sore-head, as it is called in some sections, breaks out in your flock? How would you handle a case of roup, contagious catarrh, bronchitis or dozens of other poultry troubles the majority of poultry raisers are familiar with?

Dr. Buckley answered that question by saying---"You can't expect any poultryman to remember the exact treatment for every poultry trouble that even responds to treatment, but he can have a copy of this new publication in his FARM LIBRARY and be able to go to it for reliable directions in case a mild or a serious trouble develops."

B.W.D. or what is commonly called white diarrhea takes a heavy toll of young chicks every year. That disease alone often changes profit to loss in many poultry flocks. The bulletin says that in some cases from 50 to 70 per cent of a flock of hens may be affected with this disease. Many of the eggs laid by these hens carry the microorganism, and chicks hatched from these eggs spread the disease to other birds of the flock. Chicks are highly susceptible to infection during the first 48 hours of life, but are practically insusceptible after the 5th day. In some instances the death rate of exposed chicks runs as high as 100 per cent. There are nearly 4 pages given over to the discussion of B.W.D. in this new publication.

Tuberculosis of fowls is a disease causing poultrymen much concern in many sections of the country, and it is a disease that poultrymen ought to get acquainted with because the bulletin says, "There is no treatment that will cure tuberculous birds." In other words, the remedy lies in the prevention---and that is explained in the new publication and also in a special publication called Tuberculosis of Fowls, Farmers' Bulletin No. 1200.

The various poultry parasites come in for a lot of cussing and discussing. Coccidiosis, perhaps the most troublesome of all the many parasitic troubles, was formerly thought to be caused by one little organism according to Dr. Cram who prepared the section relating to parasitic diseases. Now it is known that there are 5 or 6 kinds of coccidiosis caused by as many kinds of organisms. The severity of the case depends on how many parasites are taken into the body of the bird. It is also known that the disease runs what is called a limited course. That is--fowls that do not die during the most severe period of the disease will get well and the organisms disappear in a month's time, unless re-infection has taken place in some way.

Fleas, chiggers, lice, mites, ticks, bugs, and the various kinds of poultry worms are among the many other subjects discussed in this 62-page bulletin containing 27 illustrations and giving information on more than half a hundred poultry troubles.

Now get that radio pencil and paper ready because I'm just about ready to give you the number and title of this new publication which I know thousands of you listeners will want. Are you ready? Here goes.

The new publication is called DISEASES AND PARASITES OF POULTRY, and it's Farmers' Bulletin No.1652-F. It's free for the asking, and a post card or a letter will bring it to your mail box. Better get it now, and be prepared.

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CLOSING ANNOUNCEMENT: Ladies and gentlemen, you have been listening to Your Washington Farm Reporter broadcast his regular POULTRY program from Station___ in cooperation with the Federal Department of Agriculture. Write this Station or the United States Department of Agriculture in Washington, D. C. if you want a copy of Farmers' Bulletin No. 1652-F, called DISEASES AND PARASITES OF POULTRY.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Thursday, February 19, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Federal Farm Board Interview No. 8: How the Farm Board Keeps Track of Cooperatives.

ANNOUNCEMENT: And now your farm reporter at Washington will report to us about the farmers' cooperative movement. Each week, he interviews some expert of the cooperative division of the Federal Farm Board about some phase of cooperation. Today,

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Mr. R. H. Elsworth has been showing me how the Farm Board keeps track of the cooperative marketing movement.

Mr. Elsworth is in charge of the historical and statistical section of the Board's cooperative division. He collects records of cooperatives in this country and abroad, from the beginning of the cooperative movement up to the present hour. Those records include successes and failures, long-lived and short-lived associations, the living and the dead.

Of course, you can see how important such records are. We want to know where we stand. We want to know how many associations there are in this country. And what states they are in. What kind of associations they are. How many members do they have. Are they increasing or decreasing.

Naturally, to know where we stand now, we must know how far we have come. We need to know about the cooperatives of the past. Some of them have lived through many difficulties. Why? Many of them started in the past failed. Why?

You know the old saying, that a wise man learns from the experience of others. Well, that's true in farmers' marketing organizations, as it is in other places. When we know the background of our present co-ops; when we know what has happened and why, we're better able to guess what the future will be.

However, Mr. Elsworth says, history never repeats itself--- exactly. You can talk to a co-op manager most any time, at the end of the season, in the middle of the season, or at the beginning and he will most generally tell you this season is different. Some new element or new combination of circumstances has made a different marketing problem.

Mr. Elsworth admits that there are so many factors entering into cooperative marketing, that you practically never get the same combination of circumstances twice. But, he insists, that the man who knows what has happened is in a position to make a better judgment of the future than the one who relies altogether on chance and pure guess-work.

For that reason, he keeps an inventory not only of the associations now operating, but as complete a record as he can find of any which ever have operated.

That's quite a job. Nearly every day new associations are born. Nearly every day some struggling association goes under. A few farmers in some out-of-the-way spot may form a co-op. It may die a-borning, or live many years a flourishing local organization. The management doesn't have to report to the Federal Farm Board. The information in Mr. Elsworth's files is entirely voluntary. But whenever he gets word of any association anywhere running now or which ever was in existence, if it is not already on his lists, he writes and tries to get in touch with somebody who can give him reliable information about that co-op; when it was formed, how many members it had, why it failed, if it failed, and why it succeeded, if it was a success. He saves every scrap of information which contains a clue.

Mr. Elsworth says that since 1850, when our cooperative movement first started, until now, about 30,000 farmers associations have been formed in this country. At the present time, we have about 12,000 active farmers' organizations. That means that about 18,000 have fallen by the way-side.

What caused such a big percentage of the associations started by farmers to fail? On the other hand, many of the associations now running have lasted ten, twenty, thirty, and even forty years. Why?

One way of trying to get the answer to such questions, is to take an outstanding failure or an outstanding success and analyze it in great detail, and then assume that other similar associations may be accounted for in the same way. Other specialists of the Farm Board make such detailed studies. Mr. Elsworth, however, takes the whole mass of co-ops and aims to find what principles were followed by the successful ones and what precautions were neglected by the failures.

His records reveal that our cooperative movement has gone in waves. There is a great burst of interest, and a big increase in the number of co-ops and in the membership of co-ops. Then conditions change. Interest declines. Many drop out of existence. Some, however, keep up and going.

One of the most remarkable waves of cooperation, Mr. Elsworth says, was during the depression following the Civil War. At that time a lot of farmers felt they were not getting their share and were ready to do something, when along came a man who had devised a ritual for a new farmers' organization. The plan took like wild-fire. By 1874 there were 12,000 farmers'associations in existence. But by 1879 most of them were gone, if not forgotten. By that time, there were less than twenty left. From nothing to 12,000 and from 12,000 back to 20, in about eleven years.

Later waves didn't reach so high nor fall back so far. But after each wave, some of the new associations were riding high along with some of those older ones left living after the first wave subsided.

Bad conditions the early part of 1906-7 caused another of those waves of increase in the number of associations trying to better the lot of the farmer. That wave rose to a crest and then fell back. Again in 1920, we had a large number of farmers associations formed. That was another wave.

Since 1910, however, the U. S. Department of Agriculture and now the Federal Farm Board have been saving reports of all associations located. They are all classified by kind of organization and by States, and have been transferred to uniform records for statistical study. From the larger associations, Mr. Elsworth now gets reports not only on total amount of business done in dollars and cents, but in the quantity of the product handled.

We now have 12,000 farmers associations but unlike those 12,000 back in 1874, hundreds of those now going have stood the test of time, and have weathered many a storm. Some date back more than a quarter of a century.

Mr. Elsworth points out, however, that the increase in number of associations does not tell the whole story. Until recently the main activity of 90 per cent of the cooperatives has been that of assembling and packing products for market. Cooperation practically ended at the shipping point. Now, the tendency is toward carrying the marketing process further into the channels of trade, by creating sales agencies.

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ANNOUNCEMENT: Your farm reporter at Washington has just told us something of the statistical and historical section of the cooperative division of the Federal Farm Board, and its work of keeping track of the cooperative movement. This report is presented by Station _____in cooperation with the United States Department of Agriculture.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Friday, February 20, 1931

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Dairy Interview: HOW MILK GETS TO TOWN:(No.3) PREPARATION AND DISTRIBUTION

ANNOUNCEMENT: At this time Station_____ again presents Your Farm Reporter at Washington, who brings you today the third and last of his series of reports on "How Milk Gets to Town." Two weeks ago, you'll remember, he talked about "Production." Last week he discussed "Transportation." and today he's going to take up "Preparation and Distribution." He brings you today's discussion direct from Mr. C.E. Clement, market-milk specialist in the Bureau of Dairy Industry, of the United States Department of Agriculture. All right, Mr. Reporter...

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We have seen in the two preceding reports that our knowledge of how to produce high-quality milk is relatively new. For all practical purposes, it dates from about the middle of the last century.

Take the two C's---Cleanliness and Cooling---which form the basis of all our progress. You remember that it was not until 1842 that Mr. Jacob Vail first hit upon the happy idea that cooling milk kept it from souring. And, of course, no one could really know the meaning of cleanliness until Dr. Louis Pasteur had discovered the economic importance of bacteria.

Well, modern methods of preparing and distributing milk, are of still more recent origin.

Consider, for instance, that the separator was invented only a little more than 50 years ago.

Glass milk bottles were first used in 1886. And it was not until 1890 that Dr. Babcock worked out his butterfat test. Up until that time we had no reliable method of buying and selling milk on a fair basis.

If you have ever visited a modern milk plant you know what strict emphasis they put on the two C's; or, in other words, sanitation and refrigeration. And even, without visiting a plant, you know how important glass milk bottles and the butterfat test are to the modern industry.

But now, let's get on with the story of modern methods of preparation and distribution of milk, as sketched for us by Mr. Clement.

In the first place, most milk enters the city nowadays either in huge glass-lined tanks, or in 10-gallon cans. It may go directly to the retail plant in tank trucks; or it may be unloaded from tank cars to tank

trucks at a distant siding; or, the cans of milk may be picked up off station platforms and then hauled to the plant.

But however the milk gets there, the first thing that happens to it after it arrives is inspection. It begins at once to go through an examination for cleanliness and quality. First, experts inspect it for flavor and odor. At the same time they take samples, to be tested for butterfat and for bacterial count.

Then the milk is weighed and sent to large tanks, where it is mixed. That is, milk with a high per cent of butterfat mixes with lower-butterfat milk, in order to get a uniform product.

The next step in insuring high quality is passage through filters, or clarifiers. There usually isn't very much, if any, loose dirt in milk, of course, after it gets this far; but they are taking no chances. The clarifier removes all dirt, if any is present.

Then we come to one of the most important steps in modern milk preparation. The milk is pasteurized. It is heated to a temperature of 142 to 145 degrees Fahrenheit and held there for 30 minutes; and then is cooled down to 45 degrees or below.

Pasteurization insures the SAFETY of the milk; and increases its keeping quality, besides; without, in any way, subtracting from its food value.

Then, the milk goes into the bottle. And, as you know, modern milk bottles are clean and sanitary. They are washed by automatic machinery, and sealed by automatic machinery. The milk never comes in contact with the human hand.

Again, after bottling, the milk is put into the cold storage room at a temperature of 45 degrees or below. This is during the day.

Then, at night, distribution begins; the bottles are loaded onto delivery wagons. It is delivered during the night, of course, so that it is on everyone's doorstep in time for breakfast---and it is there 365 days a year, rain or shine, snowstorm or blizzard. Very seldom does the consumer fail to get his bottles of milk on schedule.

Incidentally, the ordinary load for the delivery man is from 200 to 400 quarts; and each man usually supplies from 200 to 300 customers.

Now, even without visiting a big milk plant it is easy to see what a large amount of equipment and labor and care, the preparation and distribution of milk requires nowadays.

In the first place, the big milk dealer has many specialists on his staff, such as veterinarians and milk inspectors. These men look after sanitation on the farms where the milk is produced, the health of the cattle, and so on.

Then, there are chemists and bacteriologists in the plant itself, to check on the quality and cleanliness of the milk when it comes in; and to keep a constant check on it as it goes through the plant; and, of course, to see that the plant is in first-class sanitary condition at all times.

Now, not the least of the labor requirements comes in book-keeping. The milk plant not only gets its milk from a large number of individual producers, but it sells to an even larger number of customers, whose accounts must be accurately kept.

Then, there are the matters of collecting empty bottles, and cleaning them which brings us to equipment.

The efficient modern milk plant must be equipped with elaborate machinery for washing bottles, filling bottles, pasteurizing milk, and for, of course, refrigeration---to mention the main, the most expensive, items.

And there is still one more problem that is well worth mentioning. The big milk plant often gets more milk than it needs---it can not control its day-by-day supply. But it has to take this milk just the same, and so something has to be done with it. Therefore, it is necessary to be equipped to convert this extra supply into butter, or cottage cheese, or condensed milk, or some other product.

Now, in closing this series of three reports, let me review the list of Department of Agriculture publications, which bear on the question of high-quality milk.

"Production of Clean Milk," is Farmers' Bulletin No. 602-F; "Cooling Milk and Cream on the Farm," Farmers' Bulletin No. 976-F; Cleaning Milking Machines," Farmers' Bulletin No. 1315-F; "Washing and Sterilizing Milk Utensils," Farmers' Bulletin No. 1473-F; "Farm Dairy Houses," Farmers' Bulletin No. 1214-F; "Improved Sanitation in Milk Production," Leaflet No. 3-L; and "Preventing Feed Flavors and Odors in Milk," Leaflet No. 25-L.

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ANNOUNCEMENT: Ladies and Gentlemen, this concludes a series of three reports, from Your Farm Reporter at Washington, on "How Milk Gets to Town." He has brought you these discussions direct from specialists of the Bureau of Dairy Industry, in the U. S. Department of Agriculture. If you would like to have copies of any, or all, of the bulletins he mentioned, write either to Station_____ or to the Department of Agriculture in Washington, D. C.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON.

February 23, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

All Regions.

RAISING SHEEP ON TEMPORARY PASTURES.

OPENING ANNOUNCEMENT: Every Monday Station ____presents a livestock Farm Reporter program in cooperation with the United States Department of Agriculture. The subject for to-day is RAISING SHEEP ON TEMPORARY PASTURES. All right, Mr. Reporter.

---ooOoo---

Well, folks, my subject for to-day, as the announcer has just told you--- is RAISING SHEEP ON TEMPORARY PASTURES. In order to get the latest information on that subject I had a talk with Mr. D. A. Spencer in charge of sheep investigations for the United States Bureau of Animal Industry.

Now Mr. Spencer is from southern Michigan where they have very good permanent pastures. Naturally, when he begins to talk about raising sheep he thinks of good permanent pastures back in his own section and recalls how easy it is to produce sheep under such conditions.

However, he says that in many sections of the country it is necessary for successful sheep raisers to make some arrangements for temporary pastures in addition to their regular permanent pastures.

This is necessary, he states, because in many instances the permanent pastures dry or as they say burn up, during the summer pasture season--- and in some cases right at a time when lambs are being finished for market. For instance, Mr. Spencer told me of one sheep raiser who depended on permanent pastures to keep the nursing ewes in the pink of condition while they were furnishing milk for the growing lambs. A prolonged drought cut the permanent pastures way down below par and right at a time when the lambs were being finished for market. This sudden pasture shortage caused the nursing ewes to drop way down in their milk production, and of course, that was bad for the lambs. However, the lambs were finally finished on supplementary feed and placed on the market, but they lacked what you sheep raisers call "bloom." According to Mr. Spencer a good pasture is one of the best known feeds for putting "bloom" on market lambs.

If conditions were ideal, and every sheep raiser had a good permanent pasture throughout the year, or even throughout the natural pasture season--- then sheep raising would be much easier than it is. However, Mr. Spencer points out that these ideal conditions do not exist throughout the country as a whole. For that reason it becomes necessary for sheep raisers, in many sections, to make some kind of provisions for temporary pastures, at certain seasons of the year.

At this point in the interview I asked Mr. Spencer to give me some advantages in having temporary pastures for sheep.

"Well," he said, "the use of temporary sheep pastures makes it possible to fit a flock of sheep into the livestock farming system, with very little change in the usual method of producing feed and pasturage for cattle and hogs.

"There's another advantage in having temporary sheep pastures," he continued, "They enable the ewes to maintain a uniform milk flow and this insures rapid development of the lambs at a time when development counts for a great deal in dollars and cents.

"Then again the use of temporary pastures assists greatly in the prevention and control of stomach worms and other internal parasites."

"Just a moment," I interrupted. "I thought such parasitic troubles as stomach worms and other internal parasites were now controlled in a great measure by drenching."

"They are," he replied, "but the use of temporary pastures is also instrumental in helping to keep them under control. For instance, a sheep raiser with temporary pastures can make frequent changes of his flock from old to new pasturage, and in that way greatly minimize losses from this source."

"What about using poor lands for producing temporary pasture crops for sheep," I inquired.

"It can be done," was his reply. "For instance, a crop of cowpeas, or soybeans can be grown on soils of rather low fertility by adding lime,phosphorus, and by inoculating the seed."

"Well," I said, "are cowpeas and soybeans good examples of temporary sheep pastures?"

"You bet they are," Mr. Spencer replied. And then he said, "Would you like to have a list of the crops often grown for temporary sheep pastures?" I told him I would like to give this list out over the radio.

"All right," he said, "I'll try to give you a few of the crops for the different sections of the country. We'll begin on bluegrass which is one of the most popular permanent pastures in sections where it can be grown. However, bluegrass is likely to be too dry in late summer and too unbalanced for an ideal feed. Bluegrass is best for a sheep pasture when used in the spring and fall and when supplemented by forage crops in the summer. Rape makes an excellent supplement for bluegrass pasture during the summer when the bluegrass is not so good for sheep pasture. Of course, it must be understood that rape at this season is a forage crop, but it can be used as such to supplement the bluegrass.

"Cowpeas may be grown as a temporary pasture for sheep, but it must be remembered that while cowpeas are good for older sheep they are unpalatable to lambs.

"In the sections where Bermuda grass grows well it may be used as a temporary sheep pasture, and is especially good when reinforced by lespedeza and bur clover. This combination makes an ideal temporary sheep pasture in the sections where these plants grow well.

"Now for the grain sections. Here we find that many sheep raisers have found that the aftermath of grain and timothy fields furnish feed for many flocks and aid greatly in bringing down the cost of carrying the flock through the summer.

"Sheepraisers in general know the value of alfalfa as a dry feed for sheep and as a pasture for the flock. Of course, as many flockmasters know, alfalfa is at its best when cut and fed as hay during the winter months. However, in sections where alfalfa grows well, and when permanent sheep pastures play out for various reasons--- alfalfa is sometimes pastured temporarily during the summer."

"What about bloating from alfalfa?" I asked.

"That's a good question," Mr. Spencer replied. "There is some danger of loss from bloating when sheep are grazed on alfalfa or clover. Sweet clover is worse than the red and alsike in this regard. However, if flockmasters will feed the sheep well before turning them on alfalfa or clover pastures and make sure that the plants are dry when the sheep go on the pasture--- little difficulty will be experienced from bloating."

Mr. Spencer closed the interview by saying that the kind of temporary sheep pasture best suited for individual sheep raisers must be determined by local conditions. Such things as labor, amount of land, soil fertility, and many other factors enter into the question of providing temporary pastures for sheep. And now for those of you who desire further information on this subject let me suggest that you write this station for Farmers' Bulletin No. 840-F, called FARM SHEEP RAISING FOR BEGINNERS, and Farmers' Bulletin No. 1181-F, called RAISING SHEEP ON TEMPORARY PASTURES. Both publications are free, as long as the supply lasts.

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CLOSING ANNOUNCEMENT: And so we close another one of the regular Washington Farm Reporter programs broadcast from Station ____ in cooperation with the Federal Department of Agriculture. Your Reporter mentioned--- Farmers's Bulletin No. 840-F, called FARM SHEEP RAISING FOR BEGINNERS, and Farmers' Bulletin No. 1181-F, called RAISING SHEEP ON TEMPORARY PASTURES. You may have copies of these publications by addressing either this station or the United States Department of Agriculture in Washington, D. C.

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UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON. RELEASE Tuesday, February 24, 1931.

NOT FOR PUBLICATION

Crops and Soils Interview No. 8: Our National Development and The Soil Survey

ANNOUNCEMENT: Your farm reporter at Washington today reports an interview with the Chief of the Soil Survey of the United States Department of Agriculture. This report shows how our national development has and must continue to spring from the soil----- Well, Mr. Reporter ------

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Dr. Curtis F. Marbut, chief of the Soil Survey, says that the development of the United States, especially its agricultural development, has been a unique period in the history of the world.

No other country has developed with equal rapidity.

As you know, a lot of folks have attributed that speedy development to the great stream of immigration throughout our history. But Dr. Marbut says that unless we had had something here to attract immigrants they wouldn't have come. They are usually represented as persecuted people seeking refuge from oppression. Dr. Marbut points out, however, that many times the number of our immigrants who came to escape persecution came to this country because of the economic opportunities here.

He declares that this country really developed because of the demand in the world for the products we could produce. In other words it was the market demand which caused its development, along with the nature of our country, as land, which enabled it to supply that world demand.

Before 1875, the development was largely because of the world demand for cotton. The commercial agriculture of the Northeastern States was carried on to an important extent to supply food to the Cotton Belt. After 1875, the world demand for grain, meat, and fats largely determined our development.

To meet that demand we cleared our forests and put the land into cultivation. After the eastern land had been put into cultivation, agriculture spread over the plains. But we didn't cease to cut our forests. Dr. Marbut points out that the demand which forced us to cultivate the praries, created a demand for construction material from our forests. He says we have often been accused of wantonly wasting our woods, especially by

Europeans. He insists it was not wanton waste. It was in response to a demand, much of which came from Europe itself.

Because of the stimulus of outside demand, Dr. Marbut explains, we expanded our agricultural area beyond the needs of our own population. We put a lot of land into cultivation; good land and marginal land. By marginal land, he refers to land on which a good farmer can not produce enough to maintain a standard of living such as is demanded in the United States. It may not have been marginal when it was put into cultivation, under the stimulus of world demand.

But this stimulus of world demand exists no longer. While we were developing we had very little competition in the world market. Since 1900, however, competition has developed fast, not only from newer farming countries in other parts of the world, but because production has been stimulated in the customer countries, so that they now produce more of their own stuff.

The world demand for our farm products therefore, is much less than before. We must depend more on our home demand than ever before.

The significant thing about that is that we must readjust our agriculture more in line with home demand. Dr. Marbut says it is not certain our world market will ever return to us. Neither is it certain that it will not return to us. It is certain, however, that we must readjust for the present.

In this country there is no provision for forcing such adjustment. It must come through natural development and the determination of our people to get along. It can best be done on the basis of knowledge. And in adjusting, Dr. Marbut suggests, we should keep a few things in mind:

First, because of low prices we shall have to shift to our most productive lands, and also to lands best adapted to the crops which we must produce. We must shift to land which will allow of cheap production costs. And we must avoid soil erosion.

To make any such adjustment, he points out, means thorough knowledge of the character of our whole country. We must know the character of the land in the United States, and should know also the character of land in other countries, so we can forcast what other countries can do. We must also study the economics of adjustment.

In order to do this, we must classify our lands basing the classification on a thorough knowledge of our soils and their capacities, a knowledge of the climate, and of the topographical and economic conditions.

Our knowledge of topography and climate, is much more complete than that of our soils.

The only institution in the United States engaged in the work of soil investigation on the land itself is the Soil Survey of the Department's Bureau of Chemistry and Soils. Its work, or as Dr. Marbut puts it, its remaining work, is to make a classification in such a way as to enable us to

determine the kinds of soils we have, how much we have of each, how much each will produce and what kinds of crops each will produce most effectively.

The Soil Survey must determine what is good land, and what particular kind of crops that good land will produce. What's more, it must determine where that good land is and how much there is of it.

Dr. Marbut points out that it is not enough to know we have some good land adapted to certain crops, but we must know exactly how much we have of that special kind, and just where it is. There is no way to express such knowledge in a practical, usable way except in the form of a map.

In fact, that is just what the Soil Survey has been working on for several years now; making a soil map of the United States. About one-third of our country has already been mapped.

The need for adjustment in land use to meet changed conditions, however, now makes the completion of our national soil map many times more necessary than ever before.

In determining the soil in all its phases, the Soil Survey also determines to a certain extent the other factors involved in the agricultural use of land, such as the climate and the topography and the vegetation which grew on the soil before. The soil is the one body in the world which stores up the effects of the natural environment such as the weather, vegetation, and topography.

This work of making a soil survey is being done by the United States in cooperation with the Experiment Stations of the great agricultural States. Practically all the Experiment Stations assist in the survey, Dr. Marbut tells me.

In that way, the results give us the combined knowledge of the broad view of conditions as a whole furnished by the national employees and the more detailed, intimate knowledge furnished by the workers of the States.

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ANNOUNCEMENT: You have just heard a sketch of the relation of the Soil Survey to our national development, as outlined by Dr. Curtis F. Marbut. This report comes to you through the cooperation of Station _____with the United States Department of Agriculture.

UNITED STATES DEPARTMENT OF AGRICULTURE

Radio Service

YOUR FARM REPORTER AT WASHINGTON. Wednesday, February 25, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes. All Regions.

CANNING POULTRY

OPENING ANNOUNCEMENT: Once more Station _____ presents Your Washington Farm Reporter in one of his regular weekly POULTRY talks broadcast from this station in cooperation with the United States Department of Agriculture. The subject for today is CANNING POULTRY. All right, Mr. Reporter.

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I received a letter from a poultrywoman in Iowa the other day requesting me to give a radio talk on canning poultry. Well, right off the bat I didn't think much of the subject, but being an obliging servant I decided to see what I could find out for her.

So yesterday morning I picked up my hat, dodged cars across famous old Pennsylvania Avenue, and finally landed on the agricultural grounds and eventually in the Bureau of Agricultural Economics.

Well, after explaining what I wanted and going from one person to another I finally wound up in the office of Rob R. Slocum senior marketing specialist in the standardization and grading service of the bureau.

Mr. Slocum is very congenial and took special pains to make sure that I understood what he was talking about. For instance, he said,

"There are now more than 26 commercial plants canning inspected and certified poultry products."

I wasn't quite satisfied with simply knowing the number of plants engaged in canning poultry because this undoubtedly changes from time to time, so I inquired as to the number of live chickens these plants consume in a year.

"They don't can the live birds," he jokingly replied, but during 1930 these plants canned over21,000,000 pounds of poultry."

Further questioning revealed that the 21,000,000 pounds represented what we term commercial dressed poultry--- that is, poultry killed, picked and prepared as it is ordinarily displayed on the commercial market. I mention that because 25,000,000 pounds of commercial dressed poultry represents more than the same amount of live birds clothed in feathers and walking about over the yards.

I asked Mr. Slocum if there was very much interest in canning poultry, and he replied that there was, and that the interest was growing. "Of course,"

he remarked, "it has its ups and downs just like all other industries and some years it's better than others, but there is a growing tendency to can more and more chicken not only at the commercial plants but in the home for home consumption."

Naturally I was seeking information as to whether or not this canning of chickens would open up new outlets for the poultry you listeners produce back on your farms, but in order to get this I had to take a little information on other things as well. For instance, I found that the United States Bureau of Agricultural Economics inspects the poultry canned at most of the commercial plants and permits the canner to print on the label of the container that the product was inspected and canned according to Federal regulations. This is of special interest to the consumer and it should be of interest to you producers because it means that your product is going on the market in a first class manner. That, of course, helps in the sale of any product.

While Mr. Slocum was talking away about canned chicken and canned noodles and canned giblets and so on I got to wondering if canned chicken would compete with live and dressed poultry, so I asked about this.

"No," he said, "I don't think there is much competition along this line. To my way of thinking, canned poultry rather opens up a new and to some extent an undeveloped field for poultry products. The housewife who wants a roasting chicken, as a general rule, still goes to the market, and picks a bird that suits her fancy. Whereas canned poultry is being used largely in many instances by apartment people, working people, and people who haven't time to dress or cook a home or even a market dressed bird."

Every bird that is canned under Federal inspection must be sound and healthy. To insure this every carcass is examined at the time of drawing, and this work is done by a qualified veterinarian representing the Department of Agriculture. When this and all other Federal regulations are met the canner is then permitted to use the label inspection legend which I mentioned a moment ago. It reads---"Inspected and certified by the Bureau of Agricultural Economics of the United States Department of Agriculture," and often gives the number of the plant that canned that particular product.

An interesting sidelight relative to the canning of chicken is the great number of canned chicken products that are already on the market. Mr. Slocum said there must be 75 or 80. There must have been 15 or 20 of these various canned poultry products on a table in Mr. Slocum's office. Chicken-a-la-king, chicken broth, chicken noodles, whole fowl, half fowl, fried chicken and many other tempting chicken dishes including chicken chop suey were among these canned chicken products I saw there.

The commercial canning of chicken occurs principally in the Middle West, the Northeast and on the Pacific Coast.

I thanked Mr. Slocum for the interesting information he had given me and then dropped around the corner for a little chat with the Extension people. I thought perhaps some of you listeners might like to know just what they think of this chicken canning idea.

Mr. I. W. Hill in charge of 4-H Club work for the southern States gave me the information on this subject. He said,

"We are encouraging the home canning of not only chicken, but of other meat products as well. We do this because it provides the home with good, wholesome meat products both in and out of season, and because it offers a profitable outlet for many farm animals."

"Well," I said, "suppose Mrs. John J_____who lives on a Farm down near Muscle Shoals, Alabama hears this radio talk and decides that she wants more information on the subject---the kind of information that will enable her to can a number of unprofitable birds now eating expensive feed---where can she get this information?"

"A good question," Mr. Hill replied, "and since Mrs. J_____ lives in the South she can get accurate information on canning chickens from her home demonstration agent. In counties where there is no home agent, the county agent looks after these things."

I gathered from the conversations with Mr. Slocum and Mr. Hill that the canning of chickens in the home for home and perhaps local consumption as well is a good way to handle many unprofitable birds when prices are low and feed scarce.

And now for those of you who desire further information on the home canning of chicken, let me suggest that you see your home agent or your county agent. If you have neither---then write to your own State college of agriculture.

And now for those of you who desire information on the commercial canning of chicken under Federal inspection, let me suggest that you write to the United States Bureau of Agricultural Economics, Washington, D. C.

--ooOoo--

CLOSING ANNOUNCEMENT: And so we close another Washington Farm Reporter program broadcast from Station _____in cooperation with the United States Department of Agriculture. This station broadcasts a Farm Reporter program every Monday, Tuesday, Wednesday, Thursday and Friday, and you are invited to tune in for these special agricultural programs.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service

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YOUR FARM REPORTER AT WASHINGTON. Thursday, February 26, 1931.

Federal Farm Board Interview No. 9: Dairy Co-ops and Milk Prices.

ANNOUNCEMENT: And now let's hear about our farmers' cooperative marketing movement. Your farm reporter at Washington, who keeps us posted on developments, as he learns them from the co-op specialists of the Federal Farm Board, has again been inquiring about milk prices and fluid-milk marketing associations. --All right, now we will have his report -------

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You know, about 40 per cent of all fluid milk marketed today is handled by cooperative associations.

That brings up this question of what effect the lower milk prices now prevailing are likely to have on our fluid milk co-ops.

Well, Mr. T. G. Stitts, economist in charge of the dairy section of the Federal Farm Board, tells me that in spite of the blue looking milk situation, our producers organizations are actually getting stronger and more and more taking the leadership in the dairy business. However, he points out that there are several things cooperative leaders may learn from what has happened.

Before we go into those, let's take a glance around the different milk sheds. Last summer, you remember, the drought hit many dairy sections pretty hard. But even with less milk in the pails in those sections, during the past fall and so far this winter there has been more milk on most of the important milk markets of this country than ever before in the history of those markets. This record-breaking flood of milk would be bad enough, if city folks were taking the usual amount. But they are not doing that. They have less money this year than last, and so consumption is lower than last year. There are more door-steps without milk bottles in the morning or with smaller bottles.

As Mr. Stitts explains, the smaller quantities sold to consumers coupled with the heavy production is responsible for the readjustment of prices paid producers.

When he told me that, I protested that there hadn't been a cut in the retail price of fluid milk to warrant the big cut in prices offered producers.

It seems from what he said, however, that the retail price of milk doesn't tell the whole story of what happens at the market end, especially when there is a big all-year-round surplus such as many markets have now.

There is a close connection between the different uses of milk. For instance, in a market where the surplus of fluid milk amounts to fifty per cent, half of the milk supply will be bought on the basis of that surplus, usually upon the basis of what it will bring when made into butter.

As you know, butter and cheese, and condensed and evaporated, and powdered milk and cream prices have been the lowest in years. Butter, of course, is the big thing, and butter is much lower. Those lower prices for manufactured milk products have helped drag down the price paid producers for fluid milk, because we have been producing more milk than is needed in fluid form.

But let's get back to the cooperatives. Regardless of why we have the low prices, they are here. Many of our associations have grown up during a period of favorable, if not high prices. Now that the cream has been skimmed off the market situation, will the dairymen members get cold feet on cooperation?

Mr. Stitts claims not. On the contrary, he says a well-managed association can be of more service to its members today than at any time in the past ten years.

You notice he says a "well-managed" association. This is a time when a cooperative needs directors and a manager with experience and sound business judgment. They need to be far-sighted enough to make decisions with an eye to the long time problem of marketing, and not merely what is expedient right now.

Mr. Stitts says there never has been a time when carefully prepared detailed information about the market was as important as it is at present. Accurate and detailed knowledge of the market he places as one of the biggest assets of a cooperative milk bargaining association.

And speaking of knowing the market, he points out, that the best managed association is not always the one which nails the high price flag to the mast and fights against any readjustment in line with supply and demand conditions.

Some canny managers figure that keeping prices at the highest possible notch for the present may stimulate production, so that when times get better, and consumers buying power returns, the market can't go up. Or even worse, it may open up the milk shed until the market is completely demoralized.

As Mr. Stitts sees it, if the price for market milk is considerably higher than can be had when it is manufactured, there will be a tendency for milk from the manufacturing sections being shipped into fluid milk sheds to compete with the regular supply on the market.

It is a serious mistake in policy, he thinks, for an association to fail to protect itself from milk flowing in from outside. There are two important things a cooperative can do to keep milk from flooding in from outside.

First, if an association has been able to keep the quality of its milk up to a high standard within the milk shed and has built up a reputation for its quality, it may often do much to keep outside milk out.

Quality is one of the things no cooperative milk organization can afford to ignore. Producers organizations cannot afford to let quality standards be lowered. Mr. Stitts recognizes that where prices are lower farmers are likely to feel that they can't afford to go to the time and expense necessary to produce quality milk. For that reason, in these periods of price adjustments, farmers organizations must give more attention to quality if they are to be of greatest service.

Close cooperation with dealers and health officials is important.

However, Mr. Stitts says if an association can't keep outside milk out by cooperation for quality there is only one alternative, and that is to meet the competition by price.

That the part of wisdom, and Mr. Stitts says a study of the cooperative milk marketing associations operating in practically all the principal cities of this country shows that most of the leaders in these organization are meeting the problems of readjustment fairly and squarely.

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ANNOUNCEMENT: You have just heard a discussion of dairy coops and milk prices by Mr. T. G. Stitts, of the dairy section of the Federal Farm Board, as reported by your farm reporter at Washington. This report comes to you from Station ------ in cooperation with the United States Department of Agriculture.

UNITED STATES DEPARTMENT OF AGRICULTURE
Radio Service
OFFICE OF INFORMATION

YOUR FARM REPORTER AT WASHINGTON Friday, February 27, 1931.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

Dairy Interview: LOOKING AHEAD THROUGH 1931

ANNOUNCEMENT: Now, we present again Your Farm Reporter at Washington. He is going to talk to us today about the 1931 outlook for the dairy business. He's been discussing the outlook with economists of the United States Department of Agriculture, and now he gives us the results of these discussions. All right, Mr. Reporter ....

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Well, in looking at the dairy situation now, we find features which seem to be rather dark, and others which aren't quite so dark, and some which might almost be called bright, from a long time viewpoint.

However, right at present the two things which stand out most prominently are both rather dark.

First, agriculture generally is in bad shape; and second, consumers generally are in bad shape.

That is the story in a very small nutshell.

In the first place, it hasn't helped any that dairying has been relatively better off than most other branches of farming. In fact, that has been one of the troubles. Thousands of farmers, especially in the wheat and cotton belts, have turned to production of milk and butterfat, for cash income---simply because milking cows, even at the low prices, is more profitable than what they have been doing. And so, DESPITE low prices, production has continued to increase.

This, of course, is unusual. But it is no more unusual than the spectacle of consumption going into a slump and staying there, right when prices ARE low.

In any event, it is these two facts, both of them hangovers from 1930, that impart much of the dark color to the outlook for 1931.

The outlook IS as you know, that low prices will continue through most of the year.

Now, speaking of 1930, another influence on the situation, of course, was the increased number of milk cows on farms at the beginning of that year.

This number also continued expanding DURING the year, despite unfavorable price changes. This expansion was undoubtedly due to the fact that at the low levels, the price of butter, fluid milk, and other dairy products still averaged above the GENERAL agricultural price level.

The fact is, that on January 31, 1931, there were 2.4 per cent more milk cows on farms than on January 1, 1930. And, at the same time, the number of yearling heifers being kept for milk cows, while about the same as a year ago, was above the number normally required for replacement of old cows.

As the outlook was explained to me by Mr. L. M. Davis, dairy products economist, the number of milk cows on farms will probably continue to increase through most of 1931---and, possibly, well into 1932. However, the RATE of increase seems to be declining. And of course, if it is, we may take this as an encouraging feature, from the long-time viewpoint---that is, looking ahead several years.

Here are the facts, which indicate that the rate of increase is slowing down. The number of yearling heifers being kept for milk the first of this year was about the same as a year ago; whereas on January 1, 1930, the number was 6 per cent greater than the year previous.

The number of heifers is still about 10 per cent above average, that is, as well as the number normally required to maintain dairy herds at their present size.

Ordinarily, Mr. Davis said, this rather large number of heifers, in comparison to the present numbers of milk cows, would bring about a 2 per cent increase per year in the numbers of cows being milked.

On the other hand, there are indications that the number of yearling heifers being kept for milk is likely to decline for several years. The number of heifer calves on farms in dairy sections on January 1, was about 8 per cent below the number a year ago; and the number saved in 1931 to be raised for milk cows, promises to be still further reduced because of low prices of cows.

The point is that during 1930, it seems that farmers saved just about the number of calves required to replace old cows. So that, if the number saved in 1931 is substantially lower than this, there should be a smaller number of heifers coming into production late in 1933.

This trend IS encouraging, from the long-time standpoint; because as you know, the rapid rate of increase of the dairy cow population has not been calculated to promote the good health of the dairy industry.

But now, returning again to our first point---the increase in production despite low prices---let me quote Mr. Davis.

"The competition of dairying with other farm enterprises is of tremendous importance at this time," he pointed out. "In parts of the wheat region and the Corn Belt, dairying is closely associated with beef production. The tendency toward increase in the number of cattle makes this sort of dairy production an additional factor leading toward too abundant a supply of dairy products, and thus lowered prices. There is likewise growing interest in dairying in the cotton belt. While the output as yet represents but a small fraction of the total dairy output, it does reveal a tendency away from the production of low-priced cotton."

Now, turning to the consumption side of the case, here's about the way it sums up:

"With the business depression continuing, no marked increase in the demand for dairy products is in prospect for the next few months. Regardless of the fact that retail prices are lower, consumption has not responded. Estimated consumption of butter in 1930 was slightly less than in 1929, despite a drop of 15 per cent in retail prices. The consumption of cheese was 1.7 per cent less in 1930 than in 1929, while retail prices were 7 per cent lower. Canned milk alone showed increases, and this was probably due to a shift from fluid milk and cream, for household purposes. Foreign markets do not afford an advantageous outlet for American dairy products, even though domestic prices have now declined nearly to the world level."

Well, every good story should have at least one moral; and this story seems to have a good one. To make money in dairying this year, it is very evident that low production costs are going to be necessary. Efficient production is going to be even more necessary than usual.

This means, of course, careful selection of milk cows; rigid culling of low producers, and more skill in feeding and management of dairy herds. All of these things promise to pay extra dividends this year.

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ANNOUNCEMENT: Ladies and Gentlemen, you have been listening to Your Farm Reporter at Washington, who has reported the results of his interviews on the dairy outlook for 1931. If you would like copies of the 1931 Agricultural Outlook Report, write either to Station _____ or to the U. S. Department of Agriculture in Washington, D. C.